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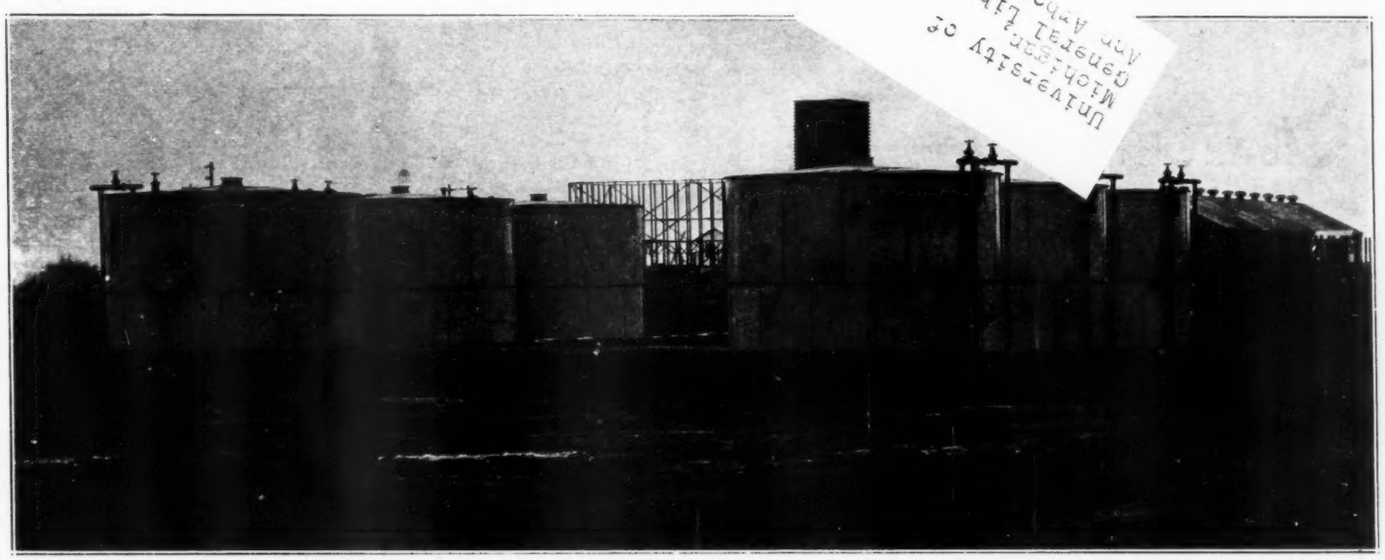

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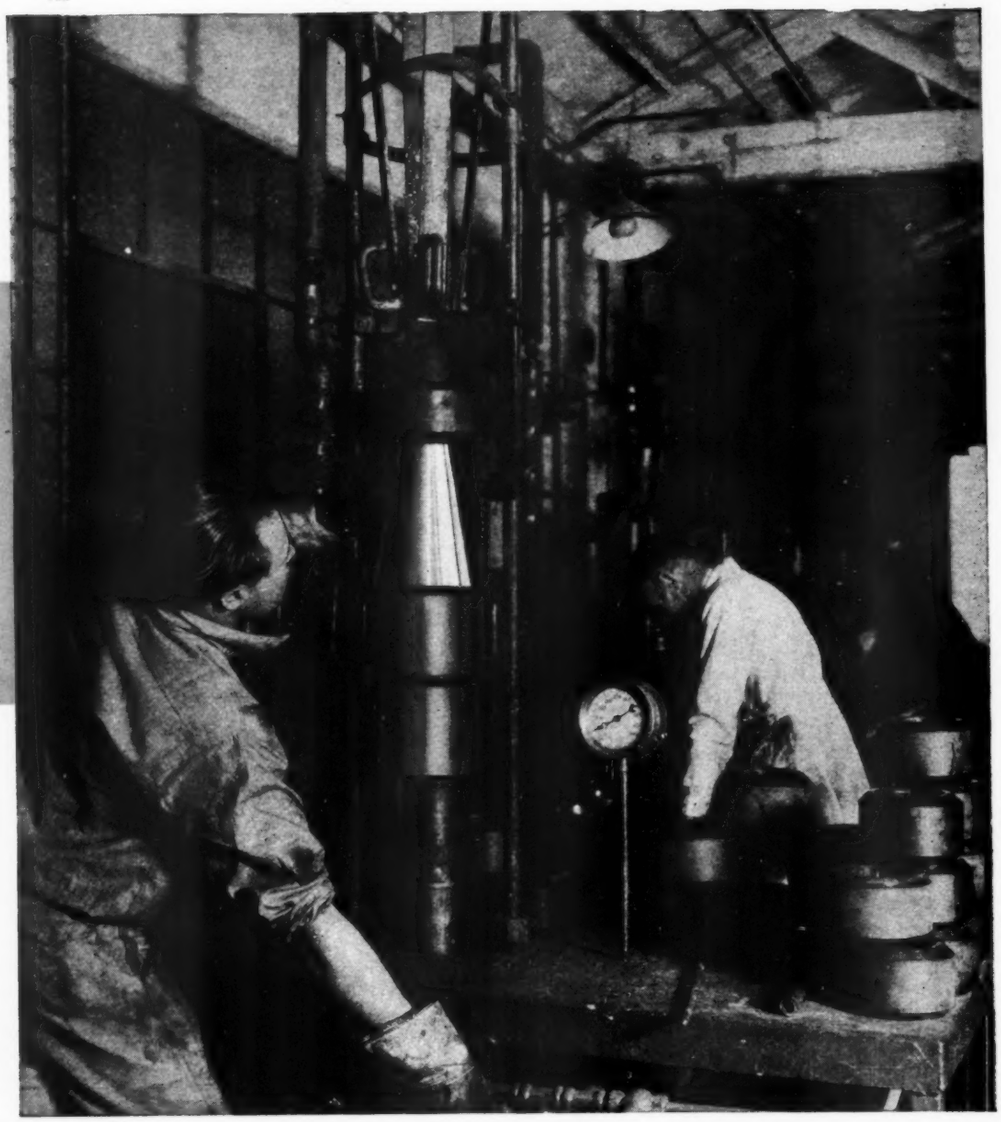

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Deem Recent Developments Favorable

Highest production in 1930, week ending Feb. 22, average daily output 2,699,096 bbls. Peak of U. S. production, week ending Aug. 24, 1929, average 2,975,435 bbls.

Better Feeling Evident as Efforts to Maintain Proration and Curtail Gasoline Manufacture Are Succeeding

By Andrew M. Rowley

Lowest daily average crude oil production in the United States during 1930 was for week ending Dec. 27 with average output of 2,144,074 bbls.

A better feeling seems to pervade the industry. Developments of the past week are regarded as favorable to the continuance of policies which seek to hold crude oil production to market requirements and gasoline stocks to a conservative level. Leaders of the oil business in Texas are active in efforts to formulate plans for preventing a flood of oil from newly discovered prolific areas in East Texas from breaking the market. A United States Court has upheld the Oklahoma Conservation Law under which the State Corporation Commission is acting in curtailing production in that State. The belief is growing the Corporation Commission of Oklahoma will limit production of the Oklahoma City Pool to approximately 125,000 barrels daily on "ratable takings," which will mean a market must be available for all production allowed there. This would eliminate any possibility of a breaking down of the proration plans in Oklahoma.

Crude oil runs to stills in the Mid-Continent area during this month show a lower average than during any other period since April, 1928, indicating refiners are co-operating in efforts to hold gasoline stocks to 40,000,000 barrels by April 1 when the main consuming season opens. Crude oil production is still averaging more than 125,000 barrels daily less than the figure recommended by the economics committee of the American Petroleum Institute as necessary for stabilization of the industry.

Indications throughout the country point to a slow but steady improvement in business conditions. Such improvement naturally will be reflected in the oil business, especially in gasoline consumption.

The industry is going through a hectic period of proposed legislation and regulations, with new laws suggested and offered in different legislatures and in the Federal Congress. Consequently, it would seem to be the best policy at this time for all branches of the industry to co-operate and stand together, backing those policies which have been recommended by the industry as a whole as the best available means of stabilizing conditions.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of crude oil in the United States for week ended February 7, and a comparison with the previous week follows:

	Feb. 7	Jan. 31
Oklahoma—		
Oklahoma City	102,710	67,310
Seminole-St. Louis	136,580	151,435
Remainder of State	229,030	225,065
Total Oklahoma	468,320	443,810
West Texas—		
Hendricks	51,508	51,514
Yates	94,545	94,549
Remainder	104,335	104,515
Total West Texas	250,388	250,578
North Louisiana	43,523	41,890
Arkansas	50,045	50,525
North Central Texas	86,761	87,447
Texas Panhandle	56,400	59,491
East Central Texas	46,915	44,347
Kansas	108,985	104,220
Total Mid-Continent area	1,111,337	1,082,308
Gulf Coast	175,148	179,768
Southwest Texas	85,596	87,857
Eastern	109,000	108,000
Rocky Mountain area	99,833	95,647
California—		
Santa Fe Springs	70,750	71,250
Long Beach	90,000	90 000
Playa Del Rey	35,000	35,750
Elwood	30,000	31,000
Ventura Avenue	45,000	43,000
Kettleman Hills	27,000	25,500
Remainder of State	229,000	229,000
Total California	526,750	525,500
Total United States	2,107,664	2,079,080

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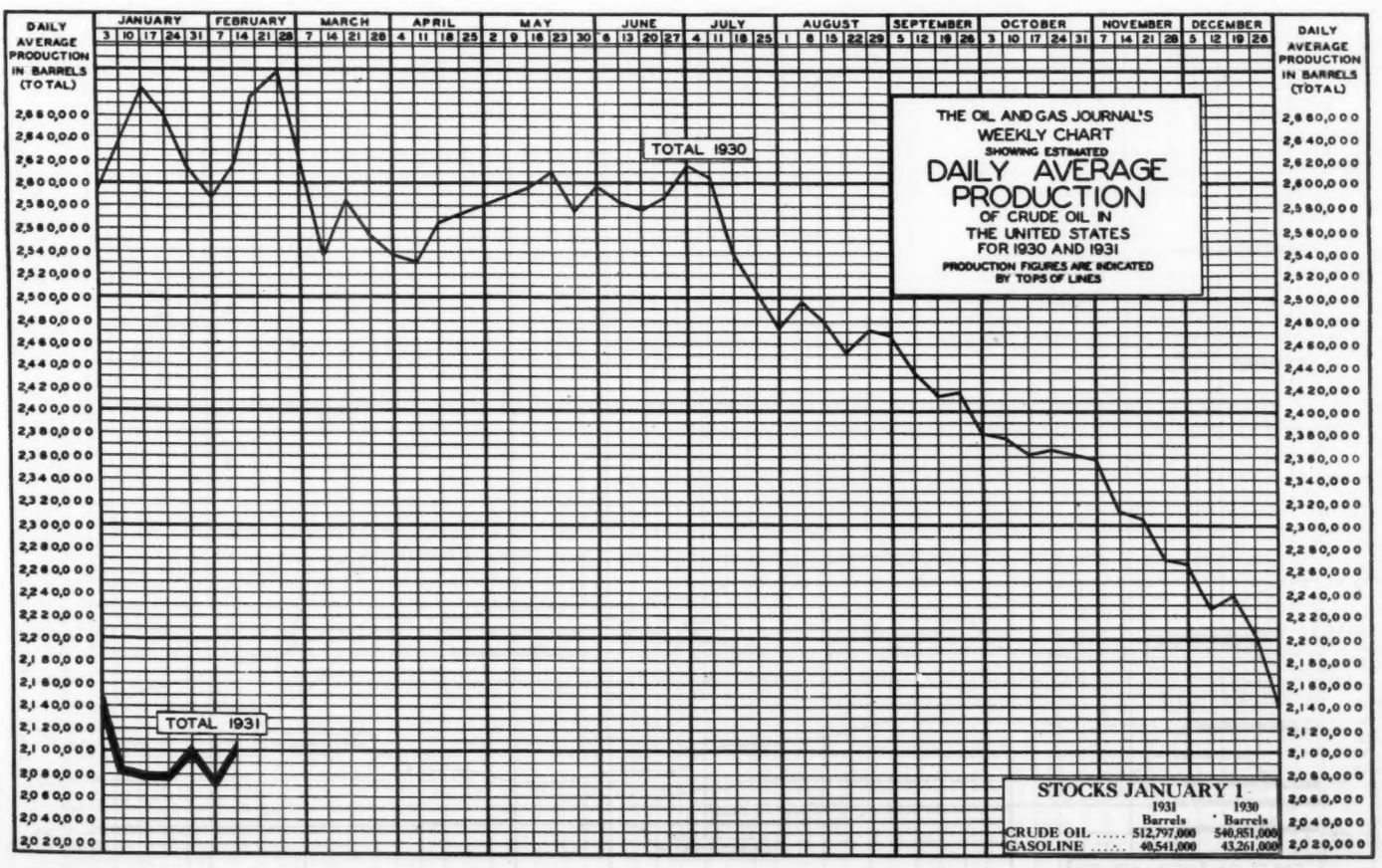


Trading Continues Light in Oklahoma

Prices on Some Grades of Gasoline and Fuels Decline. Antiknock Rating Increases in Importance

By C. O. Willson

The light trading in practically all refined products in the Oklahoma (Group 3) market since the first of the month brought price concessions from several sellers the past week.

The continued slowness resulted in slightly lower prices in refinery gasolines from a few refiners, and natural gasolines except for the A and AA grades were not as strong as they were the previous week. For the first time in several weeks, zero cold test fuels are moving slowly and buyers had no difficulty in securing material at prices from 2½ to 5 cents a barrel under the general level of quotations established in January. The decline in fuels included several grades of gas oil and furnace oil. The warm weather has not only reduced the consumption of fuels but it has also tended to minimize the importance of low cold test as a price factor. During December and January, northern buyers generally insisted on a cold test below 30 and were willing to pay premium prices for zero material.

The mild weather has been particularly disappointing to distributors of furnace oils. Cases are cited in which the actual sales to consumers are from 25 to 50 per cent under last year at this season of the year. A return of weather, more in keeping with the season, will result in an increased demand, but it is certain that in the consuming territory in which the Oklahoma refiners are primarily interested the furnace oil consumption for 1930-31 will be less than last year.

The stagnation in markets includes kerosene and lubricants, although the general price levels of these products are unchanged. There have been more inquiries for all grades of wax and prices are reported steady.

REFINED MARKET BAROMETER

Opposing trends in gasoline prices were apparent in reports from several refining groups during the past week. In the East, the market situation pointed upward when a major organization made a general advance in tank car prices for domestic movement at refineries and terminals. In the Mid-Continent and Middle West, however, the gasoline market showed a tendency to sag due to a slow demand. Some improvement was noted in the export demand for gasoline. Kerosene continues weak in practically all refining areas. Routine movement in fuels, gas oils and distillates with all grades weak in the Mid-Continent. Cylinder stock prices reduced in East with prices unchanged in other areas. Fair domestic demand for wax with slow export movement. Prices lower on some grades of natural gasoline in the Mid-Continent.

Mid-Continent—Slow movement in gasoline and fuel oil including furnace oil and gas oil results in slightly lower prices on several grades. Major buyer completes purchase of 500 cars of 400 endpoint gasoline for February delivery. Fair demand for natural gasoline with some grades lower in price. Better demand for paraffin base lubricants. Wax unchanged.

East Coast—General advance in refinery gasoline prices by major refiner, results in better tone in tank car market and other sellers expected to advance. Routine buying of kerosene with occasional price concessions. Steam refined lubricating oils lower in price. Good movement of bunker oil. No change in wax.

Chicago—Gasoline movement not up to expectation and prices weaker. Kerosene slow. Gas oil and fuel oils weak. Slow demand for industrial and motor lubricants.

Pennsylvania—Market generally steady except for higher gravity grades of gasoline which are lower. Some grades of neutral oils advanced.

California—Gasoline market unsettled although movement has improved. All grades of fuel oil freely available.

Gulf Coast—Market steady. No price changes.

Market observers who are closely watching the East Texas area where four new refineries have already been announced and who also fear that the Oklahoma City Field will be allowed to increase its production substantially within the next few weeks are predicting a continuance of wide differentials in prices.

Exaggerate Importance

However, there are some refiners who believe that the importance of this prospective competition is being overemphasized. It is pointed out in the first place that even if a dozen or more of these new plants start operating in Oklahoma City and East Texas within the next 90 days, it is improbable that their crude oil runs to stills would ever exceed 35,000 or 40,000 bbls. daily in both areas. Without exception, the plants already completed or planned are of the skimming type and do not have cracking equipment.

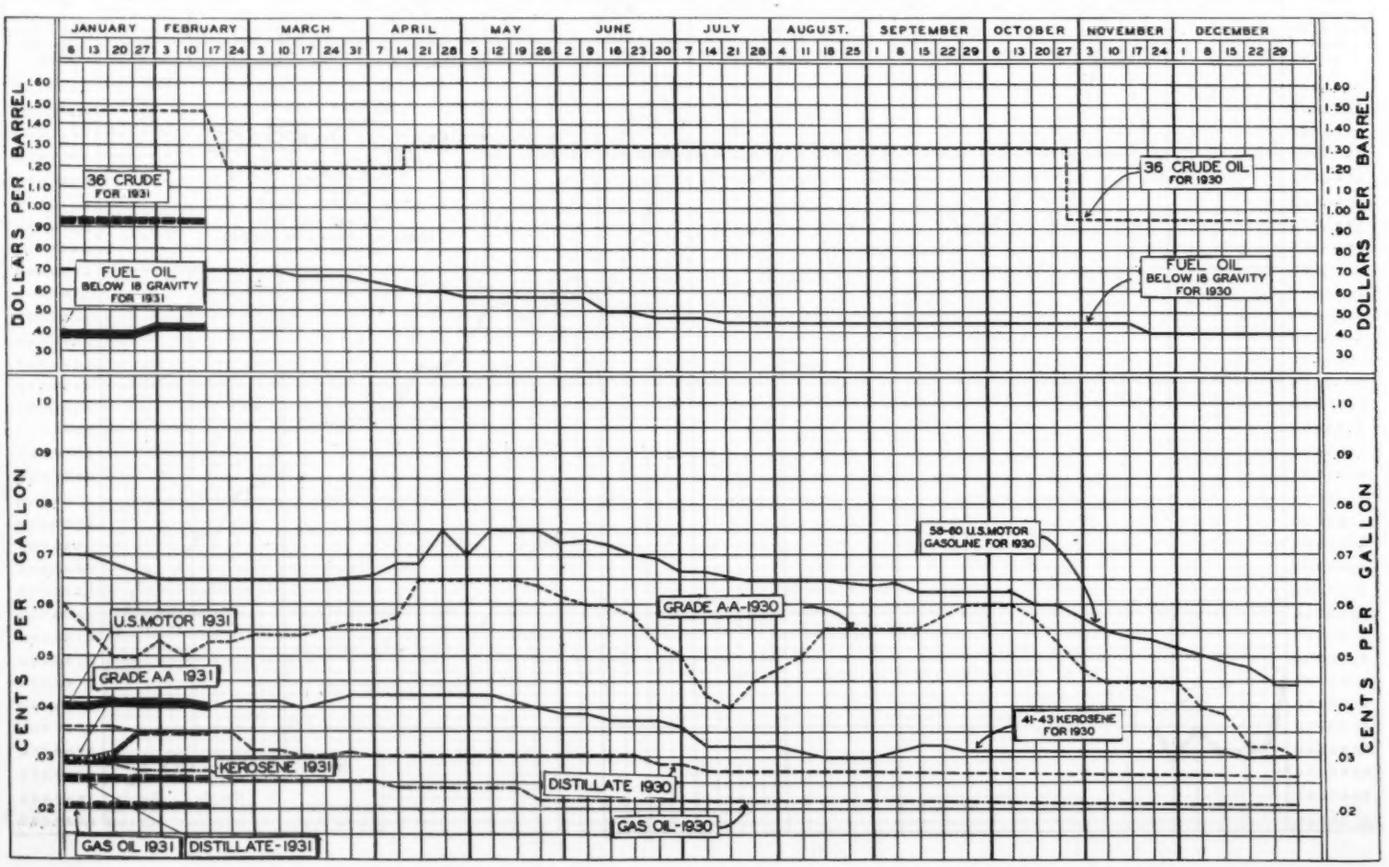
This means that the gasoline production of a number of small plants would not exceed that available from one complete refinery handling between 20,000 and 25,000 bbls. of crude oil daily. This output in itself could hardly be a controlling factor in markets in the Mid-Continent area where refiners normally handle in excess of 500,000 bbls. of crude oil daily with approximately 350,000-bbl. cracking capacity.

Considered from this angle, the danger of East Texas and Oklahoma City is not so much from the additional refinery output within the Mid-Continent, but rather lies in the probability that some of the larger refining organizations with plants outside the Mid-Continent would find it necessary to enlarge their plant operations in order to absorb the available crude oil.

It is also contended that the gasoline coming from new skimming plants will compete with the cheaper grades of gasoline and not be in direct competition with the bulk of the gasoline sold by Oklahoma, Texas and other Mid-Continent refiners. This contention is based on the fact that a large part of the gasoline obtained from a straight skimming operation in the Mid-Continent fails to meet the present requirements of the marketing trade in regard to antiknock rating. Just how the straightrun gasoline from the new East Texas crudes will rank in antiknock rating has not been announced, but it is certain that it will not equal that obtained in cracking operations.

This is another phase to the contention that the old saying, "a gallon of gasoline is a gallon of gasoline," is no longer true so far as marketing is concerned. The fact that a gasoline meets all the ac-

(Continued on Page 128)



Will Consider East Texas Proration

Committee of 20 to Be Named After Meetings and Conferences at Longview. Action Expected Before March 1

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

LONGVIEW, Tex., Feb. 9.—Walter C. Teagle, president of the Standard Oil Co. (New Jersey); W. S. Farish, president of the Humble Oil & Refining Co., and John R. Suman, vice-president of the latter company, made a trip to Tyler Sunday by special train for a conference with Carl Estes, publisher and antiprorationist. A lengthy discussion was held. A proration agreement is to be drafted by a committee which will be composed of 20 men, including 5 independent operators, 5 members representing land and royalty owners, 5 representatives from major companies operating in the district, and 5 men representing crude purchasers in the new fields. Judge Charles L. Brachfield, Henderson, chairman of the East Texas Lease, Royalty and Producers Association, ratified this tentative agreement after going over the proposition with Mr. Estes.

The committee of 20 will meet in Tyler some time before March 1 to discuss the possibilities of prorating the new fields, and final recommendations to the Railroad Commission will probably be drawn up at that time. This committee may go far towards solving the problem which has been presented by the three widely separated fields in Rusk and Gregg Counties, a problem which will soon get out of hand unless something is done immediately to curb drilling.

Meeting of Operators

Members of central proration committee of Texas, independent operators, company representatives, lease and royalty owners and landowners of East Texas met in this place February 5 to discuss proration of the new fields in the East Central Texas district, mainly in Rusk and Gregg County, and left the meeting with proration hanging in the air, many speaking ardently for it, and many against it, with resolutions adopted by one committee to ask the Railroad Commission for an early hearing on proration, and another organization asking that the fields be not considered in regard to proration until the next general proration hearing by the commission in the fore part of April.

The committee of 25 appointed previously by Senator Tom Pollard of Tyler is composed of the following: Carl L. Estes, Tyler, chairman; Tucker Royall, Palestine; Gus Taylor, Tyler; E. B. Alford, Henderson; Judge Charles L. Brachfield, Henderson; W. B. Hamilton, Wichita Falls; W. E. McKinney, Mexia; John Cowan, Mineola; Robert Motley, Overton; Charles L. Harty, Overton; Samuel McCorkle, Mexia; Malcolm Crim, Kilgore; W. A. Moncrief, Fort Worth; Dr. A. D. Lloyd, Fort Worth; Claud D. Ashby, Joinerville; John Joiner, Henderson; Fred J. Stuckey, Longview; J. D Stringer, Tyler; Thomas Beauchamp, Paris; Gus Blankenship, Jacksonville; E. L. Chapman, Fort Worth; Claude Witherspoon, San Antonio; M. L. Cox, Canton; A. D. Clark, Tyler; Frank R. Foster, Tyler. This is the active committee representing operators, land owners, lease and royalty owners and others interested in the East Texas fields.

Growing out of the Longview meeting a permanent organization, to be known as "The East Texas Lease, Royalty and Producers Association" was formed, with Judge C. L. Brachfield, Henderson, as president; W. B. Hamilton, Wichita Falls, vice president, and Carl L. Estes, Tyler, secretary-treasurer.

Resolutions Adopted

The committee of 25 adopted the following resolutions at this meeting: "Resolved; that the Railroad Commission of Texas should refrain from entering proration orders of any character effective in the newly-discovered Gregg and Rusk Counties pool or pools until such time as the area of said field is fully defined and production therefrom is sufficiently advanced to the stage where a fair potential of the above fields may be made.

"That neither the area may be defined on a fair potential arrived at in the Gregg and Rusk Counties fields prior to the general proration hearing held before your honorable body in Austin, April 1, 1931.

"That no attempt be made by the Central Proration Committee of Texas or any other agency or group to induce the commission to order a special hearing with relation to proration in the Gregg and Rusk Counties oil fields prior to April 1, 1931, for it is the belief of this committee that such action would immediately hamper oil development in this section of Texas and work hardship upon our people who, as yet, have received no benefit from the newly-discovered wealth other than that derived from trading in leases and royalties.

"That proration at this time will paralyze oil development in East Texas, and that every other oil field in Texas has enjoyed a reasonable period of flush production, and we see no reason why the Rusk and Gregg Counties Pools should be an exception to the rule.

"That the principle actuating the passage of regulations to prevent waste of oil and conserve natural resources is sound, but in view of the fact that we have nothing as yet in the way of oil to speak of to waste, and that certainly the natural resources in this area stand in no peril, we ask that no proration be imposed until such time as the Railroad Commission can make a personal inspection of this entire area, and our committee have an opportunity to further inform itself and appear before the commission."

Judge C. L. Brachfield, Henderson; Tucker Royall, Palestine; Gus F. Taylor, Tyler; Malcolm Crim, Kilgore; J. F. Stuckey, Longview, and R. A. Motley, Overton, were the committee which drafted the resolutions.

A technical committee of six was named to study the present potential production and extent of the fields and report its findings and recommendations to the Railroad Commission at the next regular proration hearing at Austin, on or around April 1, 1931: W. E. McKinney, chairman, Mexia; Jake Hamon, Jr., Ardmore, Okla.; Frank R. Foster, Tyler; Dr. A. D. Lloyd, Fort Worth; Eddie Showers, Fort Worth; C. P. Link, Fort Worth.

Favor Proration

Following the general meeting, the proration rules committee of "The Gregg and Rusk Counties Proration Advisory Committee" held a meeting. This committee is composed of independent operators and company representatives and was formed on January 31, when operators and company men interested in the new East Texas fields met at the Adolphus Hotel, Dallas, Tex., to discuss plans for curtailing production and drilling in the new areas. The committee is composed of John R. Suman, Humble Oil & Refining Co.; Jake Hamon, Jr., Cox & Hamon; H. L. Hunt, of H. L. Hunt, Inc.; E. G. Allen, Shell Petroleum Corp.; J. S. Bridwell, Bridwell Oil Co.; W. A. Moncrief, Fort Worth; H. R. Dickinson, Arkansas Fuel Oil Co.; John F. O'Donohoe, Federated Oil Co.; J. E. Fitzpatrick, Deep Rock Oil Co.; George D. Foster, Devonian Oil Co.; P. R. Smith, Pure Oil Co.; E. R. Tennant, receiver for the C. M. Joiner interests; George Calvert, Broderick & Calvert; M. B. Sweeney, Sun Oil Co.; W. L. Todd, Simms Oil Co.; W. B. Hamilton, Wichita Falls, is chairman.

The rules committee of this advisory committee, which also has members in the East Texas committee, took definite action in exact opposition to the East Texas committee and the resolutions it adopted. This committee adopted resolutions asking that the Railroad Commission hold a hearing at Austin as soon as possible in regard to prorating the Rusk and Gregg Counties fields to the market outlet, and that all lease holders and producers in the fields be given due notice of such a hearing. All present purchasers of crude oil will be asked to name their nominations from the field, and all other crude oil purchasers and pipe line companies in the State will be asked to name their nominations and when they may have lines into the new fields to take oil therefrom. David Donoghue, technical advisor of the Central Proration Committee, will be requested to ascertain to the best of his ability the present market outlet of the fields in Rusk and Gregg Counties, and the above information.

All operators, lease owners, royalty owners and crude purchasers are asked to meet at the Driskill Hotel in Austin, Tex., at 8 p. m. on the evening preceding the date set by the Railroad Commission for a hearing.

This committee also resolved, "That the operators' committee co-operate in every reasonable and proper way with all organizations and agencies working toward the end of conserving and protecting and developing in an orderly manner the great natural resources of these fields, and lend its aid in every possible way toward the enforcement of the Common Purchaser Law of the State of Texas, to the end that the greatest number of barrels be produced and saved from this great oil field and in a manner to secure for the citizens and operators in East Texas a fair market price."

With these two committees functioning in East Central Texas the outcome of proration cannot be conjectured at the present time, although something will have to be done to curtail drilling and production, and if proration is not put in force in these new areas, lack of pipe line outlets and market demand will, in itself, curtail production and drilling, and distress oil prices will prevail, having already entered the areas and causing the crude to be marketed at prices far below what it would ordinarily bring in better times.

Some of the operators are willing to drill their leases, taking what prices they can get for their crude, but the majority is anxious to maintain a reasonable posted price.

Chairman Penn's Address

R. R. Penn, chairman of the Central Proration Committee, addressed the meeting and said that major purchasers are sure to enter the fields if proration is levied and they see that the supply of oil from the areas is stabilized and is long lasting, but will not enter the fields if the oil is to be sacrificed and run as fast as it can be produced and sold. The majors, he said, will want to be assured of a long lasting supply before spending millions of dollars on pipe lines into the

(Continued on Page 132)

DEVELOPMENTS IN PRORATION SITUATION

Following meetings and conferences at Longview, East Central Texas, and the appointment of committees representing those who favored immediate action on proration and those who wished it postponed until April, a committee of 20 is to be appointed to consider the question and draft a proration petition to the State Railroad Commission before March 1.

North Central and Texas Panhandle operators fear East Texas production may force reduction of their production.

The Oklahoma Conservation Law of 1915 was upheld in a Federal Court decision handed down Monday at Guthrie, Okla. Judge John H. Cotteral of the United States Circuit Court and Judge R. L. Williams of the United States District Court held there is no interstate commerce involved in the proration of crude oil production. Judge Franklin E. Kennamer, of the United States District Court, filed a dissenting opinion.

Five of the nine members of Governor Murray's advisory committee on proration in Oklahoma submitted a report condemning the Oklahoma conservation law of 1915 and recommending a law conforming with the Texas law. The report characterizes the Oklahoma law as a price-fixing measure. A minority report signed by four members of the committee is in the hands of the Governor but has not been made public.

The Oklahoma Corporation Commission after hearing evidence for several days in the matter of the petition of Wirt Franklin that the allowable production of the Oklahoma City Field be increased to 10 per cent of the potential (which potential is estimated at about 6,000,000 bbls.) announced it would not give a decision until it had gone over all the evidence.

A public hearing has been called for February 11 in Austin, Tex., by the house committee on oil, gas and mining of the Texas legislature, to hear arguments for and against the Long-Graves general oil bill, which is an act to amend certain portions of an act passed in 1925, which amendments, if adopted, would strengthen the arm of the State Railroad Commission in the conservation of oil and gas in the State.

Governor Murray of Oklahoma has sidetracked both reports of his advisory committee and asked the governors of Texas and California to join him in devising a "workable system of conservation."

Refiners Continue Curtailment of Runs

Mid-Continent Crude Charges at Lowest Point Since April, 1928. New Plants Building in East Texas Area

By W. T. Ziegenhain

Mid-Continent refinery crude runs will be further curtailed during February and the average for the month will be the lowest since April, 1928, according to estimates received from the individual companies on the first of the month. Except for the prospects of increased refining activities in the new East Texas area, as the result of finding production in large quantities, there is nothing to indicate that there will be a breach in the program on the part of Mid-Continent refiners to hold runs near demands.

RUNS TO STILLS AT MID-CONTINENT REFINERIES

1929	
January 1	508,550
February 1	506,800
March 1	514,950
April 1	530,530
May 1	577,500
June 1	585,030
July 1	565,800
August 1	555,250
September 1	552,300
October 1	544,720
November 1	545,473
December 1	540,630
1930	
January 1	535,460
February 1	519,355
March 1	531,500
April 1	555,250
May 1	574,300
June 1	572,250
July 1	548,475
August 1	526,400
September 1	498,710
October 1	518,800
November 1	506,700
December 1	478,360
1931	
January 1	478,795
February 1	470,125

Because of the more liberal attitude assumed by the Texas Railroad Commission regarding proration in that State and because of the cheapness with which oil may be produced there, fear of a further demoralization of the Mid Continent refinery market has been transferred from the Oklahoma City area to East Texas.

New East Texas Plants

At present two 6,000-bbl. plants are being built by the East Texas Refining Co., one at Henderson and one at Longview, a 2,000-bbl. plant is being built by the Beacon Oil & Refining Co. near Henderson and an 8,000-bbl. plant is being built near the Joiner Pool by the Taylor Refining Co. A 6-inch line is being laid by the company from the field to the refinery. These plants now under construction represent a total of 22,000 bbls. additional refining capacity. In addition, there are at least three other refinery projects being investigated. Refineries already located in this area include the Louisiana Oil Refining Co. near Shreveport, the Shreveport-El Dorado Pipe Line Co. at Shreveport, Stanolind Oil & Gas Co. refinery at Superior, Crystal Oil Refining Corp. plant at Shreveport and The Texas Company plant at Shreveport. The latter two are not operating, but the combined capacity of all approximate 60,000 bbls. The combined capacity of the shutdown plants is about 20,000 bbls.

Although the refining activities in this area will probably be increased as the fields are developed, the problem of disposing of the finished products is as acute here as in any other refining area. The limited outlet for fuel oil is an important factor. The crude yields from 35 to 38 per cent gasoline by natural distillation with approximately 50 per cent fuel oil which must be disposed of outside the local area and in a territory where competition is already extremely keen.

Oklahoma

Oklahoma refinery operations will remain practically unchanged during February, a decrease of 1,950 bbls. being shown in the total daily runs. One plant has been added to the list operating refineries, namely the Century Petroleum Co. 500-bbl. plant in West Tulsa. This refinery is running approximately 200 bbls. of crude daily.

North Central Texas

North Central Texas refinery runs will decrease 3,390 bbls. during February with relatively few changes in the status of the operating plants. Three plants have been temporarily shut down, the Humble Oil & Refining Co. at Neches, the Oriental Petroleum Co. at Wichita Falls and the Waggoner Refining Co. plant at Electra.

West Texas

West Texas refinery operations remain about the same as a month ago, with no change in the status of the operating and shutdown plants. The Pecos Valley Refining Co. plant at Pyote, which has been shut down for nearly a year, is being moved to Longview in East Central Texas to be operated under the East Texas Refining Co.

Kansas

Kansas was the only state to show any material increase in the runs for the month. However, this year's February schedule remains low compared to a year ago. This group will run 79,400 bbls. and no changes have occurred in the list of operating and shutdown plants.

North Louisiana and Arkansas

Both the North Louisiana and the Arkansas groups of refineries showed a decrease in the schedule of runs for February. There has been no change in the status of the individual plants in the North Louisiana group, while only one change has been made in the normal operations within the Arkansas group. The Houston Oil Co. at Camden has suspended running crude temporarily and will rerun accumulated distillates during February. This accounts for the lesser runs showing for the Arkansas area.

MID-CONTINENT REFINERY OPERATIONS

(Based on Operations February 1, 1931, and January 1, 1931)

District—	No. of plants Feb.1	Daily crude cap. Feb.1 (bbls.)	Daily crack. cap. Feb.1 (bbls.)	Plants oper. Feb.1	Runs to stills Feb.1 (bbls.)	Plants oper. Jan.1	Runs to stills Jan.1 (bbls.)	Daily decr. (bbls.)
Arkansas	9	47,800	16,750	8	23,100	9	26,150	3,050
Kansas	15	142,000	77,400	14	79,400	14	77,550	*1,850
North Louisiana	6	59,250	21,000	4	23,900	4	26,800	2,900
Oklahoma	52	330,800	117,050	52	179,500	41	181,450	1,950
North and Central Texas	44	196,200	34,750	37	108,725	39	112,115	3,390
West Texas	29	137,800	44,700	21	55,500	22	54,730	*770
Total	155	913,850	311,650	136	470,125	129	478,795	8,670

*Increase.

REFINERY OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Feb. 1	Runs Jan. 1
Anderson-Prichard Oil Co., Cyril	5,000	4,000	4,000
Barnsdall Refineries, Inc., Barnsdall	6,000	3,200	1,500
Barnsdall Refineries, Inc., Okmulgee	10,000	3,000	1,500
Bell Oil & Gas Co., Grandfield	4,500	1,600	1,600
Black Gold Refining Co., Oklahoma City	1,500	800	600
Capital City Refining Co., Oklahoma City	2,500	700	1,000
Century Petroleum Co., Tulsa	500	200	(*)
Champlin Refining Co., Enid	16,000	8,000	13,000
Citizens Refining Co., Seminole	1,000	(*)	(*)
Continental Oil Co., Sapulpa	10,000	1,500	1,500
Continental Oil Co., Ponca City	30,000	11,000	15,000
Crump Refineries, Inc., Oklahoma City	2,000	(*)	(*)
Cushing Refining & Gasoline Co., Blackwell	1,800	1,200	1,000
Cushing Refining & Gasoline Co., Cushing	3,500	3,000	1,800
Deep Rock Oil Corp. (Shaffer), Cushing	10,000	10,000	10,000
Eason Oil Co., Enid	5,000	3,000	3,000
Electrol Refining Co., Oklahoma City	3,000	(*)	(*)
Empire Oil & Refining Co., Cushing	5,000	(*)	(*)
Empire Oil & Refining Co., Okmulgee	4,000	4,000	4,000
Empire Oil & Refining Co., Ponca City	8,000	8,000	7,000
Garber Refineries, Inc., and Omar Refining Co., Garber	3,500	2,700	2,300
Globe Oil & Refining Co., Blackwell	7,500	5,000	5,000
Globe Oil & Refining Co., Cushing	15,000	6,000	5,500
Gulf States Corp., Oklahoma City	2,500	2,500	1,750
Illinois Oil Co., Cushing	3,000	(*)	(*)
Imperial Refining Co., Ardmore	5,000	(*)	(*)
Johnson Oil Refining Co., Cleveland	6,000	3,500	5,000
Mid-Continent Petroleum Corp., West Tulsa	40,000	20,000	13,000
Marathon Oil Co., Boynton	2,500	2,000	2,000
Marathon Oil Co., Bristow	5,000	3,400	2,000
Morgan Development Co., Tonkawa	3,000	(*)	(*)
Peacock and Peveto Refining Co., Oklahoma City	3,000	650	600
Peppers Gasoline Co., Covington	1,000	700	700
Phillips Petroleum Co., Okmulgee	5,000	3,500	3,300
Producers Oil Co., Bristow	2,500	1,500	1,300
Producers & Refiners Corp., West Tulsa	6,000	4,000	4,000
Pure Oil Co., Ardmore	5,000	2,000	2,000
Pure Oil Co., Muskogee	9,000	6,000	6,000
Rock Island Refining Co., Beckett	3,500	3,500	3,000
Sinclair Refining Co., Muskogee	1,000	(*)	(*)
Sinclair Refining Co. (Pierce), Sand Springs	8,000	6,800	6,500
Sun Oil Co., Yale	5,000	4,500	4,500
Sunray Oil Co., Allen	6,500	5,200	3,500
The Texas Company, West Tulsa	15,000	14,000	14,000
Texas Pacific Coal & Oil Co., Wynnewood	2,500	(*)	(*)
Tidal Oil Co., Drumright	15,000	9,000	10,000
Western Oil Corp., Beckett	2,000	1,450	1,200
Wewoka Refining Co., Wewoka	2,000	(*)	300
White Oak Corp., Allen	8,000	1,800	5,000
Wilcox Oil & Gas Co., Bristow	5,000	2,500	2,500
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,000	2,500
Yale Oil Corp., Yale	1,000	1,000	500
Total	330,800	179,500	181,450

*Shut down.

REFINERY OPERATIONS IN WEST TEXAS

(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Feb. 1	Runs Jan. 1
Amarillo Producers & Refiners Corp., Pyote	3,000	(*)	(*)
Big Spring Refining Co., Big Spring	2,500	1,400	1,200
Big Lake Refining Co., Big Lake	2,000	(*)	(*)
Bluebonnett Oil Refining Co., Wickett	5,000	(*)	(*)
Burford Oil Co., Pecos City	6,000	4,300	4,500
Coltex Refining Co., Colorado	10,000	6,100	6,200
Cosden Oil Co., Big Spring	15,000	6,500	6,000
Deer Oil Corp., Luling	2,500	(*)	(*)
Grayburg Oil Co., San Antonio	6,000	(*)	1,200
Great West Refining Co., Big Spring	8,500	3,000	2,500
Gulf Oil & Refining Co., Sweetwater	5,000	5,000	5,000
Humble Oil & Refining Co., San Antonio	5,000	2,000	1,770
Humble Oil & Refining Co., McCamey	15,000	3,500	4,000
Magnolia Petroleum Co., Luling	3,000	3,000	3,000
Marathon Oil Co., D 1 Rio	5,000	2,000	2,000
Misko Refineries, Inc., Laredo	1,500	500	500
Mid-Tex Refining Co., Midland	2,500	(*)	(*)
Pasotex Petroleum Co., El Paso	10,800	10,000	8,000
Pioneer Oil & Refining Co., Somerset	1,500	700	700
Richardson Refining Co., Big Spring	6,000	(*)	(*)
Rio Grande Oil Co., El Paso	6,000	1,100	2,100
San Angelo Refining Co., San Angelo	2,000	200	200
Sweetwater Oil & Refining Co., Sweetwater	2,000	(*)	(*)
The Texas Company, San Antonio	3,000	2,500	2,500
The Texas Company, El Paso	2,000	1,500	1,500
Tonkawa Petroleum Co., Pyote	5,000	800	400
Texas Mexican Oil & Refining Co., Laredo	1,000	500	500
Texas Petroleum Products Co., Somerset	1,500	700	700
Wickett Refining Co., Wickett	2,500	200	160
Total	137,300	55,500	54,730

*Shut down.

REFINERY OPERATIONS IN KANSAS

(Plants which have been in operation during the past year)

Barnsdall Refineries, Inc., Wichita	4,000	1,800	1,500
Derby Oil Co., Wichita	7,500	4,000	4,000
Eldorado Refining Co., Eldorado	3,500	2,300	2,500
Golden Rule Refining Co., Wichita	1,500	800	750
Kanotex Refining Co., Arkansas City	10,000	7,000	5,000
National Refining Co., Coffeyville	6,500	5,000	5,000
Peerless Oil Refining Co., Chanute	3,000	(*)	(*)
Phillips Petroleum Co., Kansas City	6,000	6,800	5,000
Shell Petroleum Corp., Arkansas City	22,000	10,000	14,000
Sinclair Refining Co., Coffeyville	12,000	8,600	9,000
Sinclair Refining Co., Argentine	9,500	4,600	5,000
Skelly Oil Co., Eldorado	23,000	11,200	9,800
Standard Oil Co. of Kansas, Neodesha	20,000	5,000	7,000
Vickers Petroleum Co., Potwin	3,500	2,300	2,000
White Eagle Oil Corp., Augusta	10,000	10,000	7,000
Total	142,000	79,400	77,550

*Shut down.

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Court Upholds Socony-Vacuum Merger

Special Tribunal of Three Federal Circuit Judges Finds It Not in Violation of Dissolution Decree

ST. LOUIS, Mo., Feb. 7.—A special court of federal judges today approved the contemplated merger of the Standard Oil Co. of New York and the Vacuum Oil Co. into a corporation of almost $1,000,000,000 of assets. The Government sought to prevent the merger.

The opinion was written by Judge Kimbrough Stone of Kansas City, presiding judge of the United States Circuit Court of Appeals, and was concurred in by United States Circuit Judges Booth and Gardner.

It held the merger, which directors of both companies agreed a year ago to enter under the name of the General Petroleum Co., did not violate the Standard Oil dissolution decree of 1911, in which the companies were defendants, but that there are sound business reasons for it.

As a result of the decision, the government's supplemental suit seeking to block the consolidation is dismissed for want of equity. It is considered likely the decision will be appealed by the Government to the Supreme Court for final determination.

Pointing out that parties to the suit differed widely as to the meaning of the 1911 decree, Judge Stone proceeded with the construction of the decree by the Supreme Court.

Application to Present Case

That construction, applying especially to Section 6, Judge Stone continued, clearly met and disposed of the present controversy in this language on page 80 of the decree:

"* * * It does not necessarily follow because an illegal restraint of trade or an attempt to monopolize or a monopolization resulted from the combination and the transfer of the stocks of the subsidiary corporations to the old New Jersey corporation, that a like restraint or attempt to monopolize would necessarily arise from agreements between one or more of the subsidiaries after the transfer of stock by the New Jersey corporation."

This language referred to dealings between the subsidiaries after they were ordered split from the parent organization, the old Standard Oil of New Jersey.

The opinion continued that the court had no doubt the subsidiaries were enjoined from entering into combinations only if the contracts constituted "an entering or performing any like combination or conspiracy, the effect of which will be to restrain commerce or prolong the existing unlawful conspiracy and combination."

No Continuance of Monopoly

"There is and could be no contention here that the present contemplated merger is a continuance, carrying into further effect, or a prolongation of the conspiracy and monopoly found to exist in the main suit," Judge Stone continued.

"The contention is and must be that it is an entirely new undertaking. Therefore, as applied to the situation now before us, our conclusion is that the Supreme Court has construed Section 6 as enjoining a merger or a transfer of property between the subsidiary corporations which are potentially competitive only if and when such merger or transfer, at the time it may occur, constituted 'an entering or performing any like combination.'

Similar Activities

"Broadly speaking, both companies are engaged in the manufacture and sale of petroleum products. However, there are numerous products of petroleum. The basis of all such products is crude oil taken from the wells. From this many different things are made in the course of refinement and treatment of the crude oil."

The opinion then gives a history of the companies and points out the rapid changes in the use of oil since its discovery, development of markets for its products, and needs of pipe lines, tank cars, storage facilities and refineries.

"These and various other considerations," according to the opinion, "suggested the business advisability, if not necessity, of integration in the industry. The old Standard Oil combinaton was such an integrated business.

"The dissolution resulted in each (Standard Oil of New York and Vacuum) becoming an independent entity which must do its own business. Socony (trade name for Standard Oil of New York) developed a rounded petroleum products business and Vacuum continued much the same as before (in the lubricant field).

"Then there came certain influences which changed conditions in the entire industry. The three predominating influences were continued with enormous productions of crude, the rapid increase in automobiles and the method of marketing gasoline and lubricants to automobile users.

"Many old and new companies were thoroughly integrated all the way from production of crude to the marketing of the various refined products, some have developed a nation-wide business and some important foreign trade."

Retail Field Invaded

It is pointed out before the automobile came into prominence companies sold direct to the retailers, but later established their own filling stations, selling both lubricants and gasoline.

Saying the intensive quest for oil business "is not of their (the companies) making and is beyond their control, as a business current which they cannot successfully oppose," the opinion reviews the resources of the two companies and their character of business.

"There is no direct evidence in this record of any intent to restrain commerce. The only direct evidence is to the contrary. That evidence, introduced by the defendants (the companies), is to the effect that the intent and purpose of this merger is solely to meet the normal and natural business necessities of the two companies brought about by the development of, and the changed competitive and business conditions in, the industry.

Moving Purpose

"The plaintiff (the Government) does not contend that an intent to monopolize or to so restrain commerce is a moving purpose of the merger. If such intent exists it must rest upon the rule that an intent to accomplish a result may be inferred from the natural consequences of the act, as shown by the evidence.

"Not every restraint of commerce is within the act. Hence, the necessity of stating and approaching the evidence with a conception of the standard or measuring stick of what is to be regarded as restraint forbidden by the act.

"The evils sought to be averted by the act are those which spring from monop-

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Tariff Commission Files Oil Report

Comparison of Cost of Mid-Continent and Venezuelan Crude Sent to President and Congress Without Recommendations

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Feb. 9.—The United States Tariff Commission has sent its report to the President, the Senate and the House of Representatives in response to the senate resolution calling for an investigation and report on the cost of crude oil delivered on the Atlantic Seaboard from the Mid-Continent fields and from Venezuela.

The full report of the tariff commission covers about 125 pages of typewritten matter with many statistical tables. The summary of the report follows:

"The commission is directed by Section 332 (f) of the Tariff Act of 1930 to ascertain the approximate average cost per barrel to the oil refineries located on the Atlantic Seaboard of crude petroleum delivered to them from oil fields of the United States during the three years preceding 1930 and the present approximate average cost per barrel of crude petroleum from Lake Maracaibo, Venezuela, delivered to the same points. The instructions contained in this section are subject to more than one interpretation, and the various possible interpretations are fully discussed by the body of this report.

Cost of Production

"The average cost of production of crude petroleum at the well for 1927, 1928, and 1929, in the States of Oklahoma, Texas, Arkansas, Kansas, Louisiana and New Mexico, from which States is obtained the great bulk of the domestic oil refined along the Atlantic Seaboard was $1.10. The cost of transporting this oil to the Atlantic Seaboard was $0.88, including pipe line charges to Gulf ports, a purchasing charge of 10 cents per barrel, and tanker charges from Gulf ports to the Atlantic Seaboard. The total cost of oil delivered at Atlantic Seaboard was, therefore $1.98 per barrel. This cost is computed on the basis of 'company interest oil'—i.e., royalty oil has not been included in total production—and includes interest at 6 per cent on the investment of the companies.

"The cost of production of oil in the Maracaibo Basin of Venezuela, in 1929 (Section 332 (f) calls for 'present' cost and 1929 is the latest year for which costs were available) was $.056 at the point of transfer to ocean tankers. Transportation and other charges necessary to deliver the oil to the Atlantic Seaboard were $0.23, making a total of $0.79, cost delivered at Atlantic Seaboard refineries. This figure also is computed on the basis of company interest oil and includes interest at 6 per cent on the investment of the companies.

Costs Compared

"The commission has made additional comparisons of the domestic and Venezuelan costs, on bases which might be indicated by other interpretations of Section 332 (f). For example, it has compared the three-year weighted average cost in the United States and in the Maracaibo Basin, Venezuela. On this basis the domestic delivered cost is $1.98, the same figure as that used above, while the Venezuelean is $0.89, made up as follows: Cost at the point of transfer to ocean tankers, $0.65; transportation and other charges, $0.24.

" 'Delivered cost to the Atlantic Seaboard refineries' might also be interpreted as meaning the delivered prices which the refiners pay, since the price paid for crude oil by those who purchase in the open market is tantamount to the cost to them. The commission, therefore, ascertained not only cost at the well plus transportation and other charges to the Atlantic Seaboard, as summarized above, but also the delivered prices paid for both domestic oil from all fields and oil from the Maracaibo Basin, Venezuela. The three-year (1927-1929) weighted average price paid for domestic crude from the Mid-Continent Gulf area by the Atlantic Seaboard refiners was $2.06 and for the Venezuelan crude $1.10. The price paid in 1929 for domestic crude from the Mid-Continent Gulf area was $2.03 and for Venezuelan crude $1.02.

"It is necessary to point out that in comparing the costs of domestic and Venezuelan crudes, articles are being compared which are not similar. The domestic crude, from the Mid-Continent and adjacent areas, the cost of which is here compared with the Venezuelan crude, had an average gravity of approximately 33° Be. scale, while the foreign had a gravity of 18° to 19°. The domestic crude refined along the Atlantic Seaboard during the period covered yielded, largely by cracking processes, 36 to 44 per cent of gasoline, while the Venezuelan yielded 9 to 12 per cent gasoline and 75 to 83 per cent of fuel oil (see Tables 14 and 15 showing typical yields of finished products from domestic and Venezuelan crudes). Gasoline has a much higher unit value than fuel oil.

Difference in Quality

"The difference in quality of domestic as compared with Venezuelan crude is reflected in the wide difference in the price paid by the Atlantic Coast refineries. The commission has also ascertained the value of the product derived from the two kinds of crude petroleum by the Atlantic Coast refineries during each year. In 1929 the value of the products obtained from the domestic crude used was $2.97 per barrel, and from the Venezuelan crude, $1.15 per barrel. There is, however, a decided difference in the costs of refining, the average expenditure per barrel for refining processes being much higher in the case of the domestic than of the Venezuelan crude. The average costs of refining were not, however, ascertained, so that the respective values of the products of the crude over and above refining costs could not be determined.

"The commission has ascertained the cost of production and sales value of crude petroleum in all the other principal producing regions in the United States, as well as in the Mid-Continent Gulf area. The costs of production of the domestic crude have been tabulated in several different ways in order to afford as much information as possible on various phases of the industry. Costs have been tabulated by large and small companies, by states and groups of states, by fields, by cost groups, and by gravities of the oil produced. Tables showing details for the constituent elements of cost will be found in Part 3.

"In addition to the costs of production on different bases, considerable general information is given in the report on various phases of oil production in both the United States and Venezuela, and full statistical data are shown on production, imports, exports, stocks, prices, and other aspects of the petroleum situation."

Doctor Jillson's Adventures Began Early

Dam That Flooded the Farm and Boat That Almost Drowned a Brother Among the Boyhood Achievements of Kentucky's State Geologist

By Thomas F. Smiley

Although he was reared on a farm, Willard Rouse Jillson meticulously excluded from his boyhood all that dullness which commonly is associated with rural life. Adventure sprinkled his days. In fact, it sprinkled the days of the whole Jillson family, for Willard R. devoted himself with undivided zeal to extraordinary enterprises, and so long as he was around it was problematical what might happen next. This likelihood of unforeseen developments seems to have been carried along with him into adult life, for after he became state geologist of Kentucky and director of the Kentucky Geological Survey he exhibited the same blithe unconcern for the established order that had marked his juvenile years.

The transformation undergone by the office of the Kentucky state geologist has made Doctor Jillson a figure of uncommon interest. It is worth noting right here that during his administration every important mineral resource in Kentucky —petroleum, natural gas, asphalt, coal, etc.—has been treated in specially prepared reports by experts, either as a reconnaissance or in detail. There are now available 36 structural surface and subsurface geological oil, gas and coal maps for eastern Kentucky. The area covered is about 10,500 square miles, said to be the largest unit area thus completely structurally surveyed in detail in the world. Besides this, contoured structural oil and gas maps of many other parts of southern and western Kentucky have been prepared.

It was back in June, 1916, that Doctor Jillson, at that time a graduate student with a fellowship in geology at the University of Chicago, did his first professional work in the geology of oil and gas. He had been collecting Permian vertebrates in the red beds of the Brazos and Wichita Valleys in Texas, and he was broke. Whether there is any intimate connection between collecting Permian vertebrates and being broke does not appear, but it is a matter of history that in this case the absence of cash or its equivalent in negotiable collateral had assumed an acute condition. In the course of his field work in Texas young Jillson had become especially interested in the geological phases of oil and gas finding. On finishing the work and starting north he left the train at Tulsa, where he did not know a soul but where he knew there were offices of many oil companies. It seemed likely that one or more of these companies would have an opening for an up-and-coming young geologist. If there should be no opening—but for extremely urgent reasons there simply would have to be one.

One Way to Get a Job

At the nearest drug store the newcomer in a strange town easily got permission to use the telephone. Then with a telephone directory in front of him he began calling up one oil company after another. Acme, Aetna, Ameranda, Atlas, Barnsdall—no results, the response usually being that "Everybody's just gone to lunch."

Carter—ah, better luck. Yes, the chief geologist was in his office. His name was C. L. Severy. A moment later Mr. Severy was at the other end of the line in answer to a ring.

"Mr. Severy, my name is Jillson—W. R. Jillson. I've just been down in Texas collecting Permian vertebrates for the University of Chicago, and now I want to go to work for you as a geologist."

"I see," came in a friendly voice from the Carter Oil Co.'s chief geologist. "Well now, Mr. Jillson, we don't need another geologist right at this time. We might a little later and I'd be glad to talk with you then."

"Mr. Severy, a talk later would do me about as much good as a pardon would do a man after the trap had been sprung. I've got to have a job right now—this afternoon. I won't go into details, but—"

A laugh of good-natured understanding came back, and the invitation: "Well, come on over and have a talk with me." A few hours later Willard Jillson was on the payroll of the Carter Oil Co. and had been assigned to the Osage with headquarters in Pawhuska. A few months later the young man returned East for postgraduate work in geology on a fellowship at Yale University. In 1917, his student work at Yale completed, he went back to Tulsa and for a short time was employed as a field geologist in consulting work by Dorsey Hager. The same year saw him in Kentucky, where he was to become an outstanding figure.

Interest Aroused Early

Doctor Jillson was born in Syracuse, N. Y., in 1890 and his boyhood was passed on a farm on the outskirts of the little village of Onondaga Hill, in the same county. With his brothers, Edward and Frederick, he spent much time roaming over the glacial hills in that region, sometimes afoot, sometimes astride a pony. His interest was aroused by the peculiar meanderings of streams, the occurrence of fossils, the great deposits of gravel, the curious sedimentation of black shale with its many concretions. Physical features of pronounced character—caves, springs, cliff sides—stirred questionings in the boy's mind.

Years later in the Syracuse High School young Willard's teacher found that many of the principles of elementary geology already were understood by him. The boy knew what running water would do and how it did it, both on the earth's surface and beneath it. The occurrence of fossil shells held no mystery for him, although he did not know their names. Physical geography as it treated geology, then a largely unexplored science as far as he was concerned, became to him an immensely interesting subject, in which he led his class.

If Willard, Edward and Frederick Jillson had lived in a city they doubtless would have operated the most thriving pop and lemonade stand in their street, but there was no demand for such a business enterprise in the neighborhood of their home. They were not to be cheated out of this phase of a normal boy's life, however. They determined to "travel and make some money" and they hit on a plan. A sympathetic mother advanced the cash needed to buy at wholesale prices in the village nearby an array of kitchen utensils and other items of daily household use. With a team of ponies and a buckboard the boys drove out on country roads and sold their stock at retail to farmers' wives. On the return trip the boys, instead of bringing home an empty buckboard, loaded it with old bottles, odd pieces of iron and brass and various other junk, which they hoped to be able to turn into money later.

She Knew Him When

A few years ago Doctor Jillson, with his family, went back to the scenes of his boyhood for a summer vacation. They obtained quarters in a farmhouse near the old Jillson homestead. When they drove up in an automobile with the numerous trunks and miscellany that go with an outing in the country a farmer's wife, observing the large quantity of luggage, remarked scornfully: "Well, these folks needn't to put on airs around me. I knew Willard Jillson when he was a barefooted boy in this village selling kitchen things from a pony cart."

A genius for engineering manifested itself early. One of the boyhood achievements of young "Bill" Jillson, as he was known then, was a dam across a little stream that flowed near his home. It was so well made that it even drew commendatory expressions from his father. But one night there was a torrential rain. When the Jillsons arose the next morning they discovered the house was standing in a lake which had covered the garden and meadow and flooded the cellar. When the water subsided and the family emerged from the ooze Bill's dam was demolished to guard against future inundation.

Turning to other fields, the boy, with the aid of his brother Edward, constructed a boat designed to be propelled by a paddle-wheel operated with a sprocket and chain taken from their father's old bicycle. When this craft was launched on an old reservoir it was discovered it would not support the youthful inventor's weight. So he put his youngest brother Frederick in it as captain and crew. It promptly sank. Bill managed to save Frederick from drowning, but the boat with its marvelous machinery went to the bottom, where it remained. For a long time afterward Mr. Jillson viewed with suspicion any new inventions by his oldest son.

A dip into newspaper work may help to account for Doctor Jillson's unusual facility in writing books and reports. In the early part of his high school course he began producing short articles, stories and verse and eventually he was made editor-in-chief of the Syracuse High School Recorder, a monthly publication. At the age of 16 he was acting as general high school correspondent for the Syracuse Herald. Upon matriculating at Syracuse University he entered a competition as a result of which he was one of the 12 chosen for reportorial work on the Syracuse Daily Orange, an eight-page college morning newspaper. In his sophomore year he became assistant managing editor and then as a result of continued competition he was made managing editor and editorial writer. In his senior year he was made editor-in-chief. At the same time he wrote university news for the Syracuse Herald and during his summer vacations he was a full-time reporter for that newspaper.

Another Escape from Drowning

Oneida Lake, about 20 miles long and

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ANOTHER PROPHECY THAT BLEW UP

"The general boundaries of the oil region of Pennsylvania are now well established," an eminent geologist announced in 1883. "We can have no reasonable expectation that any new and extensive field will be found."

Dr. Willard Rouse Jillson

So that was that. And as for any dreams of big oil pools outside that state and as for such madness as even considering the possibility of overproduction:

"There are not any grounds for anticipating the discovery of new fields which will add enough to the declining products of the old to enable the output to keep pace with consumption."

Well, well. In fact, one inclined to cynicism might go so far as to say haw, haw. For Pennsylvania brought in Thorn Creek the very next year, Wildwood five years later and McDonald in 1891, not to mention other historic fields. And as for epoch-making pools in other states, why, it's becoming as hard to enumerate them as it is to recall the name of the Vice President. Glenn Pool, Cushing, Spindletop, Smackover, Salt Creek, Midway-Sunset—what a train!

Which goes to show what? That geology is bunk? That geologists chatter through their hats? That the hazel twig and the oil-smeller are as trustworthy as the magnetometer and the torsion balance? Not for a minute. It merely goes to show that the historian is on safer ground than the prophet.

The Oklahoma City Field, taking it as an example, explodes the geological forecast of '83, both as it related to new oil fields and as it related to the assumed inability of output to keep pace with consumption. On top of that it affords striking evidence of how thoroughly the petroleum geologist himself has broken the limitations which once held him, and with the research, imagination, faith and resolution of the real scientist, has taken high place in the business of finding underground conditions favorable for the accumulation of oil.

For Oklahoma City owes its discovery to the geologist. And the geologist, who a half century ago solemnly averred the end of oil production was in sight, has revealed to the world the amazing possibility that there is no end at all.

Marketers Mobilize to Preserve Code

A.P.I. Board Meets in Chicago March 4 to Consider Commission's Action. Mid-Year Meeting of Marketing Division at Same Time

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, Feb. 9.—With the petroleum industry just recovering from the shock of the Federal Trade Commission's action in virtually nullifying the industry's code of ethics developed to achieve stabilization in marketing operations, prompt steps have been taken by the American Petroleum Institute to preserve for the industry as much of the benefits of the code as possible, and preliminary reports indicate that the rank and file of the industry will align itself with the Institute and preserve many of the improvements which the code has brought into being.

W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, visited Washington during the week and requested the Federal Trade Commission to rescind and hold in abeyance for 60 days the action taken by it without advance notice, withdrawing its approval of the petroleum industry's trade practice rules. The request was made in order that the status quo might be preserved pending the holding of a national conference of those engaged in marketing petroleum products to prepare and submit objections to the commission's action.

To insure prompt action by the industry in voicing its sentiments regarding the Trade Commission's action, E. B. Reeser, president of the Institute, has announced that in place of the regular meeting of the Institute's board of directors scheduled for New York on February 25, the board will meet at the Stevens Hotel, Chicago, on Tuesday morning, March 3, at which time the commission's action will be taken up. The Chicago meeting, however, will take on the aspect of a miniature convention of the Institute, the midyear meeting of the Division of Marketing originally scheduled for Tulsa next May having been moved up to March 4 in Chicago. A meeting of the general committee, Division of Marketing, will precede the board's meeting. The Division of Marketing General Committee will meet on March 2.

National Conference

The Chicago meetings will thus take on the appearance of a real national conference of marketers, with a record attendance looked for in view of the importance of the code to the marketing policies of the industry.

In a special meeting to the chairmen and members of all regional and state code committees, Paul E. Hadlick, secretary of the general committee of the Division of Marketing, says: "In view of the attached copy of letter from the Federal Trade Commission, meetings of regional and state code committees for the purpose of administering the National Code of Practices for Marketing Refined Petroleum Products should be suspended until further notice from the American Petroleum Institute.

"Further, in view of the Federal Trade Commission's action and the necessity for the prompt holding of a national conference of marketers to determine future policy and procedure, the midyear meeting of the Division of Marketing of the American Petroleum Institute, heretofore scheduled to be held in Tulsa, May 13-14, has been advanced and it will be held instead at the Stevens Hotel, Chicago, March 4, at which time all marketers of petroleum products in the United States are invited and requested to attend."

While the industry is thus mobilizing to determine its future attitude with respect to the Code of Ethics, there has been a strong reaction among many leading oil men at the Federal Trade Commission's reversal of policy with respect to the code. The petroleum industry's Code of Ethics was developed at the expense of considerable time, trouble and money and the commission's reversal of policy has come at a time when the industry was in the final stages of organizing an enforcement division. More than 16,000 members of the industry are signatories to the code as originally approved by the Trade Commission, and while the code has not been successful in eliminating all of the wasteful, unfair and uneconomic practices in petroleum marketing, it has nevertheless made considerable headway in bringing about a return of generally normal operations in the marketing division, and petroleum leaders are not disposed to let it lapse without a determined effort to salvage at least some of its benefits.

Will Adhere to Provisions

Although the full reactions of the industry to the Trade Commission's order are not yet available, it is evident thus early that many prominent interests within the industry propose to adhere to the general provisions of the code in their marketing operations. The attitude of the commission, unless rescinded, will doubtless force the signatories to the agreement to withdraw from the agreement, but there is a strong possibility that a majority in the marketing division will determine individually to follow the code as a marketing guide, with future sales operations to be conducted in conformity with the practices which majority sentiment in the industry have defined and accepted as fair and equitable.

The General Committee of the institute's Division of Marketing, which will determine the policy of the marketing division with respect to the code, is a strong one. In addition to E. G. Seubert, president of Standard Oil Co. of Indiana, its chairman, the committee includes W. T. Atkins of the Skelly Oil Co., J. W. Carnes of Sinclair Refining Co., H. D. Collier of Standard Oil Co. of California, H. B. Earhart of the White Star Refining Co., S. B. Eckert of Sun Oil Co., M. G. Eitelman of Barnsdall Refining Co., W. H. Ferguson of Continental Oil Co., H. D. Frueauff of Cities Service Co., H. R. Gallagher of Shell Oil Co. of California, W. T. Holliday of the Standard Oil Co. (Ohio), C. N. Humphrey of Standard Oil Co. (Nebraska), Isaac H. Johnson of Johnson Oil & Refining Co., Roy B. Jones of Panhandle Producing & Refining Co., R. D. Leonard of the Atlantic Refining Co., R. W. McDowell of the Mid-Continent Petroleum Corp., R. D. Matthews of Union Oil Co. of California, G. R. Nutty of Gulf Refining Co., W. S. S. Rodgers of The Texas Company, E. L. Shea of Tide Water Oil Co., C. G. Sheffield of Standard Oil Co. of New Jersey, H. A. Trower of Phillips Petroleum Co., W. G. Violette of Standard Oil Co. (Kentucky), L. S. Wescoat of the Pure Oil Co., H. A. Wilkinson of Standard Oil Co. of New York, A. C. Woodman of Richfield Oil Corp. of New York, W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, and Paul E. Hadlick, secretary of the Division of Marketing. These men present a thorough cross section of the industry's marketing division, and their decision with regard to the code is awaited with interest.

Difficult to Reconcile

Members of the industry find it difficult to reconcile the Trade Commission's action with respect to the petroleum trade's ethics code with some paragraphs of the commission's annual report for the fiscal year ended June 30, 1929. This report said in part: "One of the commission's most successful and far-reaching means of effecting savings for an industry is its trade practice conference procedure which permits the members to meet and agree to outlaw unfair methods of competition, making it possible at one time to eliminate numerous pernicious practices a hundredfold, correction of which would require long litigation if 100 offenders were to be proceeded against individually.

"Even considering only a single industry, it is difficult to arrive at specific amounts saved. One reason is that moral values do not readily lend themselves to financial estimates and the benefits derived by an industry from the work of the commission are often largely ethical in character. * * * It would be impossible even to estimate for a given year what the abandonment of unethical and economically wasteful practices means to the business community in terms of dollars. The cost of private litigation that would be necessary were it not for the commission's procedure would alone be enormous to contemplate."

The same report of the commission, dealing with industry's reaction to trade practice conferences and resultant adoption of codes of ethics, quotes an unnamed secretary of a petroleum trade association as stating "any estimate of the monetary value to the petroleum industry from elimination of unfair and uneconomic practices resulting from the trade practice conference must be more or less of a guess. Taking the United States as a whole, I would say there is an annual saving of $75,000,000 to $100,000,000."

Commission Record

Again from the same report of the Trade Commission appears the following:

"At a conference held with members of representatives of an entire industry who desire to eliminate unfair methods of competition, rules of business practice are adopted by the industry and submitted to the commission for action. Those rules applying to violations of the Federal Trade Commission Act are affirmatively approved by the commission. Thereafter the members of the industry sign an agreement binding themselves to abide by the rules. Thus a large number of potential complaints of unfair competition are disposed of at a time. Both the trade practice conference and the stipulation procedures have evolved since creation of the commission to combat unfair methods of competition. It is the policy of the commission to encourage self-regulation of business and industry wherever consistently possible and the trade practice conference is one of its most effective agents in this endeavor."

Notwithstanding the various statements which the commission has made from time to time regarding its "helpful" attitude toward industries desirous of ridding themselves from unfair and unethical practices, not necessarily actually prohibited by existing laws, it appears evident from the commission's ruling on the

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HOUSE COMMITTEE PLANS HEARING ON EMBARGO AND TARIFF BILLS

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Feb. 6.—A favorable report on the Capper bill placing an embargo on importation of petroleum has been made by Senator Johnson of California.

It limits the importation of crude oil to 16,000,000 bbls. per year, during the next three years, and for that period absolutely prohibits the importation of any refined products.

The bill was put upon the calendar, although it seems improbable that it can be taken up for consideration and passage, although doubtless some senator in his own time when he obtains the floor, when some other measure is being considered, may speak upon it.

Senator Pat Harrison of Mississippi has given notice that he will move to have this bill together with the bill of Senator Shortridge of California referred to the Finance Committee, but up to this time he has not made such a motion.

Procedure in the Senate since January 7 has prevented any measure except the Howell bill, amending the National Prohibition Act for the District of Columbia, from coming out. This bill, together with three others, have been made the unfinished business of the Senate, appropriation bills and unobjected bills being allowed to take precedence. However, the parliamentary situation is such that a single objection, when directed to anything except appropriation bills, will prevent any measure from being taken up.

Chairman Johnson's Report

Senator Johnson's report, which was made by a vote of nine to six of the Committee on Commerce, follows:

"The Committee on Commerce, to whom was referred the bill (Senate Bill 5,818) to regulate commerce between the United States and foreign countries in crude petroleum and all products of petroleum, including fuel oil, and to limit the importation thereof, and for other purposes, reports favorably thereon, and recommends that the bill do pass without amendment.

"Senate Bill 5,818 is emergency legislation. It is a direct result of the deplorable condition of the oil industry, which threatens not only ruin to the independent oil producers of the country, but has already caused widespread unemployment, with its consequent distress, in the states where the oil fields are situated. The testimony before the committee was that more than 100,000 men have been thrown out of employment, and that the peculiar conditions existing in respect to the production of oil in the United States have played havoc with one of the greatest industries of the country. The committee does not regard the bill reported as establishing by any means a complete cure for the present lamentable conditions. It is at best a palliative; but it may afford a small measure of relief and, believing that it may accomplish something, and may aid people who require it and a most important industry of the nation, we think, as an emergency measure, it ought to be passed.

"The bill limits for the three ensuing calendar years the total importation of crude petroleum to 16,000,000 bbls. for each of said years and it seeks to prorate the importations permitted upon the basis of the amount of importations for 1928. The refined products of petroleum are prohibited for the three calendar years ending December 31, 1933. The act, it will be observed, for only a brief period attemps to control importations. The brief period of the control it

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Crude Price Below Production Cost

Gasoline One-Third Less Than Average Since 1921, Says President R. C. Holmes of The Texas Company

By R. C. Holmes
President, The Texas Company

The outgoing governor in a message of January 15 to the Texas State Legislature under the item of "Natural Resources," is quoted as follows:

"In this connection it is proper to direct your attention to the fact that at present Texas oil is being produced in large quantities and sold on a distressed market in competition with crude oil produced at a low cost in foreign countries.

"The spread between the price of crude oil and the sale price of gasoline is so great as to suggest that the consumer of the gasoline is paying an excessive price or that the oil resources of the State are being hammered down and sold on a market that deprives Texas of wealth that rightly belongs to it, or that both are happening. This is a proper subject for legislative consideration and it is nothing short of legislative duty to see that neither the vice of monopoly nor waste results in depriving Texas of the value of its natural resources."

Everyone is today probably more than usually aware of the wisdom and necessity of confining legislative activities so far as possible to those which will correct obvious inequities and objectionable trends or tendencies, and on the whole be helpful and encouraging, rather than burdensome and destructive to industry. The accomplishment of this, naturally, requires most thorough and painstaking study of the causes of the generally unsatisfactory conditions and the problems that confront us in the solution of the difficulties. Broadly speaking, whatever brings about a reasonably stable, prosperous and healthy condition and security of the nation can be considered in the interest of all industrial and other activities.

Being more directly interested and better informed of the petroleum industry than of other activities, I take this opportunity to set out a few facts that may be useful in any consideration of legislation, or other activities affecting this particular industry.

Much has been done in the last few years, and particularly in the last few months, in Texas and other oil-producing states that is commendable and to the credit of those states in gradually bringing production into better control, tending to minimize the waste of oil and gas, and diminishing the economic losses previously attending these operations. It will be most unfortunate if, through any lack of proper understanding and consideration of this problem, we should fail to accomplish those things that are possible under proper and desirable conservation activities in bringing about some definite stability to the whole petroleum situation.

The average posted prices of crude oil today are lower than the average cost of production, which is a condition that admittedly is not in the interest of Texas, any of the other oil-producing states, or of the nation, and certainly not in the interest of the producers of petroleum, of which there are many thousands. Any consistent, constructive, conservation activities will be so conducted as to avoid the loss of oil that would result in the condition which would close down the great areas of settled production and stripper wells, constituting almost the entire production of the States of Pennsylvania, New York, West Virginia, Kentucky, Ohio, Indiana, Illinois, Wyoming and Montana, and much of the production in Kansas, Oklahoma, Texas, Louisiana, Arkansas and California. There would be a much better situation if crude production could be so restricted or controlled by state law that only the market requirements would be drawn from the wells, in which case the producer and royalty owner would have a much better chance of securing a fair price for their crude, and the State a better revenue from its gross production tax.

On the matter of gasoline prices; they cannot be considered excessive unless the increasing state taxes and the cost of distribution make them so, as it is a well-known fact that most United States refiners are netting back at their refineries today less than cost.

The average service station price for

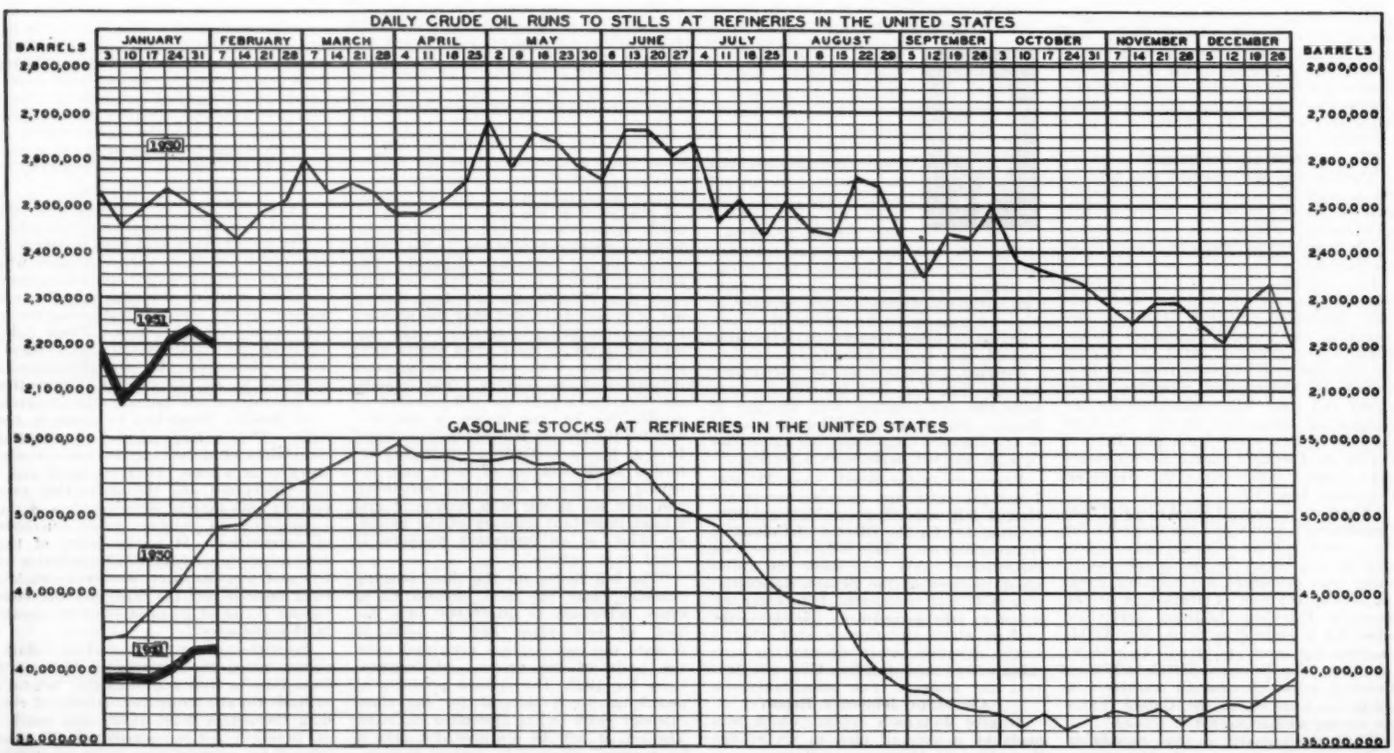
(Continued on Page 100)

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks in barrels—for the week ending February 7.

	Week ending February 7				Week ending January 31				Week ending February 8, 1930			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	448,600	7,018,000	7,905,000	100.0	461,000	6,913,000	8,219,000	100.0	3,181,600	7,892,000	6,850,000
Appalachian	93.8	82,100	1,359,000	1,072,000	93.8	85,300	1,252,000	1,056,000	91.0	623,500	1,528,000	686,000
Indiana, Illinois, Kentucky	97.5	261,100	4,886,000	3,125,000	97.5	248,000	4,806,000	2,988,000	98.6	1,843,200	7,070,000	3,068,000
Oklahoma, Kansas, Missouri	89.4	236,700	2,921,000	3,844,000	89.4	235,300	2,933,000	3,838,000	89.1	1,850,100	4,447,000	2,919,000
Texas	91.9	510,000	6,976,000	9,908,000	91.9	551,000	6,856,000	9,926,000	90.3	3,693,900	7,579,000	12,527,000
Louisiana and Arkansas	98.3	138,000	1,698,000	2,320,000	98.3	137,700	1,438,000	2,415,000	96.8	1,307,000	2,466,000	2,234,000
Rocky Mountain	93.1	36,300	1,738,000	940,000	93.1	23,800	1,737,000	949,000	93.6	379,000	2,674,000	1,022,000
California	98.8	426,600	15,861,000	101,829,000	98.8	465,300	15,722,000	102,321,000	99.3	4,129,700	15,641,000	109,651,000
Total United States	95.7	2,139,400	42,457,000	130,943,000	95.7	2,217,400	41,657,000	131,712,000	95.4	17,008,000	49,297,000	138,957,000
Texas Gulf Coast	100.0	403,400	5,962,000	7,476,000	100.0	434,900	5,710,000	7,470,000	99.4	2,870,100	6,534,000	9,821,000
Louisiana Gulf Coast	100.0	100,600	1,502,000	1,329,000	100.0	96,700	1,212,000	1,390,000	100.0	904,200	2,093,000	1,407,000

(1) Per cent of refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



Data for 1930 based on weekly reports of the American Petroleum Institute. Data for 1929 derived from monthly reports of the Bureau of Mines, Department of Commerce. Figures for last week not shown in graph but are included in above tables.

"The State of the Art" TO-DAY

Yesterday some high grade refinery engineers would not consider the installation of gas engines to be operated on refinery gases. And at that, their judgment was good, it being based on the "state of the art" in building gas engines.

¶ To-day these same engineers have a different view point. The new TRANSIT GAS ENGINES have demonstrated that they are eminently suited to burning refinery gases, thereby utilizing in a most economical manner, gases that were formerly wastefully burned.

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The OIL and GAS JOURNAL

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Cracking Paraffin Base Crude Oils

Gas Oil and Kerosene Stock Used in Securing Large Yields of Gasoline High in Antiknock Properties. Blend With Straightrun

By Gustav Egloff, E. F. Nelson, Paul Truesdell
Universal Oil Products Co.

Refineries operating on Pennsylvania grade crude oil today furnish a stage on which the possibilities of the cracking process are being demonstrated, perhaps more impressively than elsewhere. In these plants the cracking process has the fullest opportunity to show its mettle, because it is up against conditions generally held most difficult to meet.

Paraffin oils—such as kerosene, gas oil, petrolatum and the like—are the charging stocks which must be cracked, and the chief duty laid upon the process is to convert the paraffin hydrocarbons into unsaturated, aromatic, naphthenic and other hydrocarbons of antiknock character.

The process must cope with these conditions, plus the high volatility characteristics demanded of gasoline today, and at the same time produce a large yield from the charging stock. Despite belief to the contrary, high antiknock motor fuel can be produced from paraffin oils by cracking.

SECOND OF SERIES

The accompanying article is the second of a series describing results obtained in refining crude oils from several fields in United States and foreign countries. The first article, which was published in last week's issue, gave a general discussion of the advancement in the art of cracking.

The next article will be concerned with results obtained in refining five different grades of crude oil secured from one field in South Texas.

Today Pennsylvania kerosene can be cracked to yield more than 75 per cent of gasoline of 90° F. initial boiling point and 370° F. endpoint. This gasoline has an "octane number" of 75, or to put it in other words, a benzol equivalent of 60 per cent. The Ethyl standard is 74 octane number or 59 per cent benzol equivalent.

Cracking has been practiced in Pennsylvania for several years in a limited way, but only recently have changing market conditions emphasized, in the minds of refiners of Pennsylvania crude, all the advantages the cracking process holds for them. In Pennsylvania, as elsewhere, the earliest units were installed more to convert lower-priced stocks into higher-priced gasoline than to make gasoline of a particular quality, which today is the chief aim of cracking.

For many years, as is well known, Pennsylvania refineries were run with the prime object of making lubricating oils of superquality, and gasoline was regarded largely as a by-product. The Pennsylvania refiner is still as much concerned as ever with his lubricating oil, and is constantly improving its quality, but gasalone also has risen to the position of real importance that it deserves. He is devoting more and more attention to its antiknock quality as well as to its volatility.

The cracked gasoline made from Pennsylvania charging stock is not only a high antiknock gasoline, but, blended with straightrun gasoline from the crude stills, a motor fuel can be produced which compares favorably with the natural antiknock gasoline made from crudes, such as California, and the Pennsylvania refiner has had to meet severe competition in his marketing territories from California gasoline.

When the cracking process was proposed as the solution of the gasoline problem confronting the Pennsylvania refiner, doubts were expressed that the light paraffinic distillates from Pennsylvania crude could be economically cracked without resorting to very high temperatures or pressures. In some cases doubt was also expressed that high antiknock motor fuel could be produced at all from paraffin charging stocks.

A large amount of work, however, has proved the fallacy of these doubts and fears.

Straightrun Gasolines

Gasolines derived from atmospheric pressure distillation of Pennsylvania crude oils are predominantly paraffinic in their hydrocarbon content. The low boiling members of the paraffin series have excellent nondetonating properties, but the higher members of the straight chain paraffins present in the gasoline derived from Pennsylvania crudes knock badly when subjected to combustion conditions in a motor.

Branch chain paraffin hydrocarbons, such as iso-octane, are nondetonating, whereas normal heptane knocks so badly that it will not function in a present-day motor. The paraffins present in Pennsylvania gasoline are mainly of the straight chain type.

A hydrocarbon analysis and distillation of a straightrun gasoline derived from Pennsylvania crude follows:

Hydrocarbon series—	Per cent
Paraffin	77.9
Unsaturated	2.2
Naphthene	13.0
Aromatic	6.9

A.S.T.M. 100 CC. DISTILLATION

A.P.I. gravity	61.8
Initial boiling point	100° F.

Per cent distilled over—	° F.
10	159
20	193
30	220
40	243
50	265
60	280
70	313
80	338
90	369
95	395
End boiling point	406

The gasoline was then distilled into 10 per cent cuts and the properties of each fraction were determined as to distillation range and knock rating.

The antiknock properties of the gasoline fractions were determined by means of a "series 30" Ethyl knock testing apparatus and are expressed in terms of per cent benzol equivalent and octane number. The benzol is added in varying percentages to a Pennsylvania "standard gasoline," the latter taken as zero knock rating.

The unknown motor fuel is matched with the standard gasoline to which benzol has been added until they show the same knock intensity in the motor. A series of tests was also made using varying percentages of iso-octane in normal heptane, matching the knock rating in terms of per cent benzol equivalent.

From this relationship the iso-octane per cent or octane number of the gasoline was recorded. The Pennsylvania gasoline showed a 62 per cent benzol equivalent for the first 10 per cent fraction whereas the 80 to 90 per cent and the 90 to 97.5 per cent fraction showed respectively minus 16 and minus 26 per cent benzol equivalent. This means that the two last fractions of the gasoline required 16 and 26 per cent benzol added to them to match the "standard Pennsylvania gasoline."

The distillation range of the 10 fractions of the gasoline and their knock ratings, in terms of benzol equivalent, octane number and cc.'s of tetraethyl (T.E.L.) required to match "Standard Ethyl Gasoline" which has a benzol equivalent of 59 per cent or octane number of 74, are tabulated as follows:

PENNSYLVANIA GASOLINE

Fraction per cent—	A.P.I. gravity of fraction	100 cc. A.S.T.M. distillation of fraction I.B.P. ° F.	10%	20%	50%	90%	E.P. ° F.	% Benzol equivalent	Octane number	Cc.'s T.E.L. req.
0 to 10	78.0	86	92	98	126	198	241	62	77	...
10 to 20	74.0	101	118	126	159	244	244	54	68	0.7
20 to 30	69.5	130	159	167	188	224	270	50	63	1.6
30 to 40	62.5	176	196	202	216	256	303	46	59	2.4
40 to 50	59.3	214	225	229	243	282	329	38	51	4.5
50 to 60	56.3	240	250	254	272	320	351	28	42	8.1
60 to 70	53.8	268	278	283	299	335	379	26	41	8.5
70 to 80	51.6	301	312	316	329	362	400	0	29	13.5
80 to 90	51.0	330	339	343	355	383	414	—16 app.	21	...
90 to 97.5	47.2	370	380	382	393	416	437	—26 app.	14	...
(Loss 2.5%)										
0 to 100	61.5	100	159	193	265	369	406	33	47	6.1

PENNSYLVANIA GASOLINE

Fraction per cent—	A.P.I. gravity of fraction	100 cc. A.S.T.M. distillation of fraction I.B.P. ° F.	10%	20%	50%	90%	E.P. ° F.	% Benzol equivalent	Octane number	Cc.'s T.E.L. req.
0 to 30	78.5	86	111	123	160	248	273	56	70	0.45
0 to 50	73.3	90	126	153	193	253	303	53	67	0.9
0 to 60	68.9	106	151	170	214	273	324	50	63	1.6
0 to 67.5	66.2	108	155	181	226	294	345	47	60	2.2
0 to 70	64.5	100	154	180	230	304	350	46	59	2.4
0 to 77.5	63.0	104	166	193	245	324	360	44	57	2.85
0 to 82.5	61.8	108	171	201	253	335	371	40	53	3.9
0 to 85	61.3	114	175	207	262	340	380	39	52	4.2
0 to 100	61.5	100	159	193	265	369	406	33	47	6.1

"Zero" Gasoline

The following data covers the volatility and knock rating of various fractions of a paraffinic gasoline which matches the standard Pennsylvania gasoline which we use as a zero knock rating base motor fuel for test purposes.

Fraction per cent—	A.P.I. gravity of fraction	100 cc. A.S.T.M. distillation of fraction I.B.P. ° F.	10%	20%	50%	90%	E.P. ° F.	% Benzol equivalent	Octane number	Cc.'s T.E.L. req.
0 to 10	80.7	84	107	116	148	212	258	55	69	0.6
10 to 20	68.8	133	158	166	186	229	276	48	61	2.0
20 to 30	64.5	179	194	199	216	256	304	42	55	3.4
30 to 40	61.1	210	220	228	242	283	326	37	50	4.9
40 to 50	57.8	241	252	256	270	312	363	21	36	10.6
50 to 60	56.1	268	278	284	297	334	368	—4	27	...
60 to 70	53.7	296	307	311	324	360	396	—19	10	...
70 to 80	52.5	322	332	336	348	381	407	—24	16	...
80 to 90	50.8	354	361	365	376	402	426	—28	12	...
Bottoms	47.0	401	406	409	419	452	480	—30	10	...
0 to 100	58.6	126	200	222	298	396	436	0	29	13.5

Gasoline From Crude

The following analyses cover the volatility and knock ratings of various fractions of gasoline derived from pipe line Pennsylvania crude oil.

Fraction per cent—	A.P.I. gravity of fraction	100 cc. A.S.T.M. distillation of fraction I.B.P. ° F.	10%	20%	50%	90%	E.P. ° F.	% Benzol equivalent	Octane number	Cc.'s T.E.L. req.
0 to 10	87.3	73	83	91	126	...	255	too volatile		
10 to 20	77.4	88	111	122	154	221	268	57	71	0.3
20 to 30	69.4	120	150	158	186	244	294	52	65	1.2
30 to 40	65.4	148	180	186	206	257	316	48	61	2.0
40 to 50	61.9	190	203	209	227	272	311	45	58	2.6
50 to 60	59.1	216	225	230	244	286	323	43	56	3.1
60 to 70	56.3	241	250	256	270	307	337	37	50	4.9
70 to 80	54.4	269	279	283	294	326	354	27	42	8.1
80 to 90	52.7	301	308	312	321	343	371	0	29	13.5
Bottoms	49.7	341	350	354	364	402	450	—21	18	...
0 to 100	63.5	104	161	191	252	345	384	39	52	4.2

From the foregoing data it is evident that the straightrun gasolines from Pennsylvania crude oils are relatively low in knock rating. A series of cracking tests was made upon kerosene distillate derived from Pennsylvania crude under temperature conditions of 935° F. to 980° F. and a pressure of 350 pounds.

Chemical analyses were made on straightrun and cracked Pennsylvania gasolines to determine their hydrocarbon content. It is interesting to note how the cracking operation converts the paraffin hydrocarbons of the kerosene into unsaturated and aromatic hydrocarbons, which are largely responsible for the antiknock rating of the cracked gasoline.

The comparative data on the hydrocarbon content of the straightrun and cracked gasolines are shown in the table:

Hydrocarbon groups—	Straightrun Pennsylvania gasoline	Cracked Pennsylvania gasoline
Unsaturated	2.2	33.0
Aromatics	6.9	29.3
Naphthenes	13.0	14.2
Paraffins	77.9	23.5

A comparison of the knock ratings of "standard Ethyl Gasoline" with straightrun and cracked gasolines is given with the cc. of tetraethyl (T.E.L.) fluid required to bring the straightrun gasoline to "Ethyl standard."

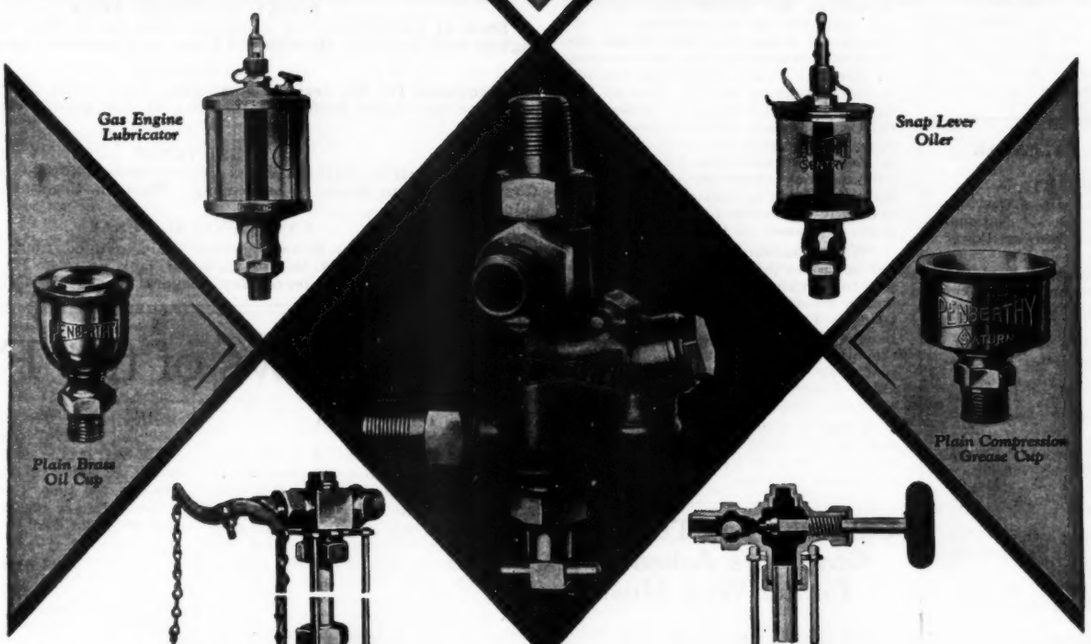
	"Ethyl" standard gasoline	"Zero"	Pennsylvania	Gasoline from Pa. pipe line crude	Cracked gasoline from Pennsylvania kerosene			
Benzol eqivalent, per cent	59	0	33	39	60	61	63	64
Octane number	74	29	47	52	75	76	78	79
T.E.L. cc.'s required to bring to Ethyl standard	..	13.5	6.1	4.2	Cracked gasoline better than Ethyl standard gasoline.			

Pennsylvania kerosene has always been noted for high quality. It is excellent kerosene, but frequently the supply has exceeded the demand, and it was not generally known that kerosene could be read-

(Continued on Page 127)

PENBERTHY PRODUCTS

PREDOMINATE



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KANSAS DISTRESS OIL OFFERED OUTLET BY INDIANA STANDARD

INDEPENDENCE, Kans., Feb. 9.—W. S. Fitzpatrick, chairman of the board of directors of the Prairie Oil & Gas Co., issued a statement today in regard to the production and crude marketing situation in the old eastern fields of Kansas in which he says:

"We received today a letter from E. J. Bullock, vice president of the Standard Oil Co. of Indiana, offering to buy 300,000 bbls. of crude oil from the Prairie Oil & Gas Co., to be taken at the rate of 6,000 bbls. per day through the Prairie pipe line from the so-called stripper wells in Kansas.

"We are willing to co-operate with the Indiana company and, if need be, act as agents in the purchase of this oil if by so doing we can accommodate the Indiana company and the producers, but there is more than 6,000 bbls. of this oil.

"It is rumored that the Indiana company has arranged for its pipe line to connect up a goodly number of the wells in different counties of Kansas and it may be when these connections are made that we will find that 6,000 bbls takes care of the balance. If so, there can be no difficulty in working the problem out satisfactorily, but it is necessary that we should know from what properties we are to take the oil and that the oil taken will be taken by the Indiana company."

Woodring's Statement

A press dispatch from Topeka on Saturday said that officials of the Standard Oil Co. of Indiana had been in conference with Gov. Harry Woodring and following the conference Governor Woodring issued the following statement:

"To relieve the situation, Standard Oil Co. of Indiana officials have assured me they will today tender to Prairie Oil & Gas Co. an order to purchase from that company for delivery to them through the lines of the Prairie Pipe Line Co. at Woodriver, Ill., 300,000 bbls. of crude oil, said oil to be purchased by the Prairie Oil & Gas Co. from Kansas distress wells which have not been connected since the Prairie Oil & Gas Co. discontinued running oil from them on January 1, 1931. According ot the Standard Oil Co. of Indiana officials, that is more than the estimated amount of distress oil in Kansas. Prairie Pipe Line Co. is the only company which has in past served these remaining producers, and it is economically impossible for any other company to connect to them.

"While Standard Oil Co. of Indiana has agreed to this only temporarily, subject to changes of condition of industry, and in no event for a longer period than 60 days, I feel that this will afford sufficient time to put this situation up to the other companies in such a manner that they will do their share to bring about a permanent solution, and I shall use every effort to compel them.

"I feel it only just and right to say that the Standard Oil Co. of Indiana is certainly doing all I can ask to solve this distressing situation."

OIL MAN'S CALENDAR

FEBRUARY

10-14—Chicago, Ill., American Society of Engineers, National Fuels Meeting, and Midwest Power Conference, Stevens Hotel.

16-19—New York, N. Y., 140th Convention, American Institute of Mining and Metallurgical Engineers.

16-21 — San Francisco, Calif., National Western Metal Congress and Exposition.

18—Louisville, Ky., Kentucky Petroleum Marketers Association, Seelbach Hotel.

18-19—Peoria, Ill., Illinois Petroleum Marketers Association.

24—New York, N. Y., General Committee, A.P.I. Division of Marketing.

24-26 — Columbus, Ohio, Ohio Petroleum Marketers Association, Neil House.

25—New York, N. Y., Board of Directors, American Petroleum Institute.

MARCH

4—Chicago, A.P.I. Division of Marketing, Stevens Hotel.

10-12—Excelsior Springs, Mo., Western Petroleum Refiners Association, Elms Hotel.

11-13—Detroit, Mich., Michigan Oil Men's Association, Statler Hotel.

16-22—Los Angeles, Calif., second annual Exposition, Oil Equipment and Engineering Exposition.

19-20-21 — San Antonio, Tex., American Association of Petroleum Geologists, Gunter Hotel.

30-3—Indianapolis, Ind., eighty-first meeting, American Chemical Society.

APRIL

11-19—Detroit, Mich., convention, Aeronautical Chamber of Commerce.

13-18—Philadelphia, Pa., eighth annual convention and exposition, American Oil Burner Association, Ben Franklin Hotel.

15-16—St. Louis, Mo., first mid-year meeting, A.P.I. Division of Refining, Statler Hotel.

23-24—Cleveland, Ohio, semiannual meeting, National Petroleum Association, Hotel Cleveland.

MAY

4-9 — Charlotte, N. C., Good Roads Convention.

11-14—Memphis, Tenn., Natural Gas Department, A.G.A.

19-21 — Tulsa, Okla., Natural Gasoline Association of America, Mayo Hotel.

JUNE

3-4—A.P.I. Division of Production, Baker Hotel, Dallas, Tex.

California and Texas Governors Asked to Confer With Murray

OKLAHOMA CITY, Okla., Feb. 10.—Governor Murray today sidetracked the reports of his special oil committee and asked the governors of Texas and California to join him in devising a workable system of oil conservation which might be adopted by all oil-producing states.

Governor Murray asked the other two chief executives to study his proposed plans for healing the ills of the industry and report to him next week at the latest.

It is understood at the capitol that chief among Murray's suggestions is that the state conservation officer, or oil umpire, be named by the governor and be a state employe.

The governor is said by administration confidants to favor a nation-wide proration plan.

COMMISSION INCREASES OKLAHOMA CITY OUTPUT

OKLAHOMA CITY, Okla., Feb. 10.—Daily average allowable production of the Oklahoma City Pool was increased from 90,000 barrels to 125,000 barrels by an order of the state corporation commission signed late today.

The new allowable flow is based on a 6.25 percent flow of a potential output of 2,000,000 barrels daily. The old order allowed a 1.58 percent flow on a potential of 5,838,804 barrels daily.

The new order is for duration of the present state-wide order which covers the first quarter of 1931.

The new order calls for a hearing March 2 of the commission to ascertain whether the demand for crude shall have increased and to take additional evidence in the matter.

High Spots in Field News

NORTH LOUISIANA-ARKANSAS
Caddo and Zwolle areas holding attention.

OKLAHOMA
Showing of oil and gas in Kay County wildcat.

KANSAS
Deep sand area in Canton district extended mile and a half south.

SOUTHWEST TEXAS
Increased activity in Southwest Texas. Saxet Field extension sprays oil.

GULF COAST
Another geophysical prospect proved, in Plaquemines Parish. Hankamer gets extension.

NORTH TEXAS AND PANHANDLE
Operators in both districts alarmed by threat of production in East Texas and effect on their production allowance.

NEW MEXICO
Well in Caprock area, Lea County, southeast of Maljamar and 15 miles northwest of Hobbs, has 2,785 feet of oil in hole.

ROCKY MOUNTAIN AREA
Show of 1,000,000 feet of noninflammable gas in Park County, Colorado, highest well in world. Greasewood Dome well increases output.

CALIFORNIA
Associated Oil Co. test in Dominguez Field flows 3,375 bbls. Gas conservation law found ineffective because of low gas-oil ratio in Kettleman wells.

WEST TEXAS
Isolated well in southern Ward County flows 100 bbls. of fluid. Andrews County well shut down to set casing. Western Crane County well finds sulphur water.

EAST CENTRAL TEXAS
Haynes Co.'s No. 1 Brown, Joiner Field, gauged 1,000 bbls. in 6 hours. Two Joiner Field wells fail to flow for lack of gas. Harrison, Cass and Upshur Counties getting lease play. Several rigs up in Gregg County area.

Late News of the Fields

CALIFORNIA

LOS ANGELES, Calif., Feb. 10.—The Associated Oil Co. focused attention of operators on Dominguez Field this week by bringing in No. 12 De Francis flowing 3,375 bbls. per day from 4,667 feet. The well failed to clean up, however, and the company was obliged to effect another cement job as the output was cutting 70 per cent water. Contrary to general reports this is not a new zone but is one of the two virgin zones underlying the present producing Callender horizon.

The Los Angeles city council definitely prevented any attempt to drill a test well in the Riverside Drive area of Los Angeles city when it unanimously adopted an emergency measure defining the entire area as residential property. This prevents the drilling of a well which was scheduled to be put down on a small piece of property which previously was not covered by any restrictive zoning law.

NEW MEXICO

DENVER, Colo., Feb. 9. — Western Drilling Co. in its No. 1 Bridges, SE NW, Section 17-17-34, Cap Rock area, Lea County, New Mexico, encountered show of gas and oil at 4,688 feet. At 4,694 feet oil rose 1,000 feet in the hole in one hour and at 4,707 feet oil was standing 2,785 feet in the hole. Drilling is continuing in hopes of encountering another break in the lime. Location is southeast of the Maljamar Pool and 15 miles northwest of Hobbs Pool.

OKLAHOMA

Wilwright Gas Co. and others' No. 1 Wildegrube, NE cor. SW, Section 14-27-1, a wildcat test in Kay County, Oklahoma, found oil and gas in the Bartlesville sand at 3,587 feet. The oil rose 200 feet in the hole in a few minutes. It is shut down awaiting a pipe line connection and tankage. The nearest oil production is Blankenship Petroleum Co.'s producer in Section 27-27-1, approximately 2 miles away. If a commercial producer is found at the test it is expected considerable drilling will result. The four offsets are owned by Wilwright Gas Co., Gypsy Oil Co. and J. M. Homan.

Droppleman and others' No. 1 Charty, NE cor. SW SW, Section 29-6-6, in the Konawa Pool, Seminole County, is estimated to be making 100,000,000 feet of gas from sand after drilling the cement plug at 2,566-2,607 feet. The well was

(Continued on Page 129)

SCORE SHEET ON OIL PRODUCTION

Below is shown allotted average daily production in the United States from October 1, 1930, to April 1, 1931, suggested by the American Petroleum Institute's special committee on the economic situation, and the actual daily average production during the week ending February 7:

	Allotted (bbls.)	Actual (bbls.)	Over (bbls.)	Under (bbls.)
Okla., Kans., S. W. Texas, North Texas*	953,700	852,977	....	100,723
West Texas and southeast New Mexico	316,300	289,681	....	26,619
North Louisiana-Arkansas	86,400	93,568	7,168	....
Gulf Coast	177,800	175,148	....	2,652
Rocky Mountain	58,600	60,540	1,940	....
California	530,100	526,750	....	3,350
Other fields	110,600	109,000	....	1,600
Total	2,233,500	2,107,664	9,108	134,944

Net average daily underproduction, 125,836 bbls.

*North Texas includes North, Central and East Central Texas and Texas Panhandle.

Oklahoma's Output Up 25,000 Barrels

Large Increase in Oklahoma City. Wells in West Chandler and Tatums Extend Pools. Economies in Leasing

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

The daily production of crude oil from Oklahoma shows an increase of approximately 25,000 bbls. a day for the week. The gauges show the daily production for the week ending February 7 to have been 468,300 bbls. The increase is from the Oklahoma City area which had an average of 102,650 bbls. The majority of the wells in the field are even with production and have completed the taking of new potentials under the percentage plan. The estimated one-day potential of the Oklahoma City Field is given as 6,100,000 bbls. It will not be possible to take the potential of the entire field until all the drilling tests are completed, as wells that are shut in for the 65-day period are not given potential gauges until they are on regular production.

During the week two pipe line projects were completed in the Oklahoma City Field. The Continental Oil Co. started running oil through its 8-inch pipe line system from the Oklahoma City Field to the main line near Tonkawa, where it will be run to the refinery at Ponca City.

The other pipe system completed was Anderson-Prichard Oil Corp.'s 16-inch gas line in the Oklahoma City Field, connecting its leases with the Indian Territory Illuminating Oil Co.'s line which will handle the gas until the Anderson-Prichard company constructs a gasoline plant of its own.

The Continental Oil Co. is taking oil from the Sunray Oil Co.'s leases in the Oklahoma City Field. The leases and producing wells were acquired from Gant & Garvin. The Continental Oil Co. recently made a contract with the Sunray Oil Co. for 1,000,000 bbls. of crude oil at the market price.

Tom Slick Oil Co.'s No. 1 Trumbley, NW cor. NE SW Section 2-11-3w, blew out during the week and the well blew wild for 23 minutes before it was shut in. It was estimated the well made 400 bbls. of oil while flowing open. A small amount of property damage resulted.

New Completions

A number of wells were completed in the Oklahoma City Field during the seven days ending February 7. Dengail Oil Co.'s No. 1 Woodson, NW cor. SE NE Section 10-11-3w, made 9,917 bbls. in six hours from the Wilcox sand at a total depth of 6,475. Tom Slick Oil Co. and Phillips Petroleum Co.'s No. 1 Owens, NW cor. SE NE Section 3-11-3w, made 8,363 bbls. of oil from the Wilcox sand at 6,230-6,401 feet. Phillips Petroleum Co.'s No. 1 Walnut, NE cor. NW NE Section 3-11-3w, flowed 10,549 bbls. of oil in four hours from the Wilcox sand at 6,288-6,480 feet. Tom Slick Oil Co.'s No. 3 Foote, NW cor. SE SW Section 2-11-3w, made 231 bbls. of oil in two and one-half hours, and the next day's gauge was 472 bbls. of oil in four hours from the Wilcox sand at 6,220-6,566 feet. Anderson-Prichard Oil Corp.'s No. 1 Westfall, NW cor. NE Section 3-11-3w, flowed 6,400 bbls. from the Wilcox sand at 6,288-6,434 feet. Tidal Oil Co. and John Mabee's No. 1 Reynolds, NE cor. SW NE NW Section 10-11-3w, flowed 4,244 bbls. the first two hours and the gas was estimated at 35,000,000 feet a day, from the Wilcox sand at a total of 6,504 feet.

In Carter County

One new producer was completed in the Tatums Pool, Carter County and work has been started on three tests. The Trevlyn Oil Co.'s No. 4 Mitchell, SW cor. SE, Section 24-1s-3w, on the southeast east edge of production, is estimated to be good for 800 bbls. of oil a day. The well was swabbing 40 bbls. an hour from sand at 2,318-2,490 feet. The new locations announced were Amos Drilling Co.'s No. 2 Hooks, SW cor. SE SE, Section 13-1s-3w, in the northeast part of the pool; Carter Oil Co.'s No. 2 Hooks, NE cor. SE NE, Section 24-1s-3w, on the east edge, and Magnolia Petroleum Co.'s No. 4 Dickerson, SE cor. NE, Section 24-1s-3w, on the east edge, was rigging up.

Other tests in the area nearing completion were Magnolia Petroleum Co.'s No. 9 Gill, SW cor. SE NE, Section 23-1s-3w, drilling into the oil sand at 2,275 feet after cementing the casing at 2,260 feet; same company's No. 1 McCrory, SE cor., Section 10-1s-3w, about three-quarters of a mile northwest of production, preparing to test a showing of oil at 2,353-83 feet, after plugging back from a total depth of 3,520 feet; same company's No. 3 Carter, NW cor. SE SW, Section 14-1s-3w, swabbed 41 bbls. from a series of sands at 2,398-2,600 feet; Woodruff and others' No. 1 Brady, NW cor. SW SW, Section 32-1s-3w, a wildcat, 2 miles southeast of production, cemented casing at a total depth of 2,300 feet and shut down.

Stephens County Operations

In the pool west of Comanche in Stephens County, George Pace completed a well estimated at 250 bbls. and announced two new locations. G. Pace's No. 8 Watkins, SW cor. SE NE, Section 21-2s-7w, is estimated at 250 bbls. a day from sand topped at 1,722 feet. Same operators staked two locations, No. 9 Watkins, NE cor. SE SE, Section 21-2s-7w, and No. 5 Bush, in Section 3-2s-8w, on the southwest side of the Empire Field.

The Junior Oil Co.'s No. 1 Thompson, NE cor. SW SE, Section 1-1-7w, a wildcat, is the deepest drilling test in the area. It was below 3,200 feet with nothing showing.

Shasta Oil Co.'s No. 1 Tilley, NE cor., Section 23-1s-10w, Cotton County wildcat, is being abandoned a failure at a total depth of 2,503 feet. The test is north of the Walters gas field. A showing of gas was found in the test at 2,165-72 feet, and a showing of black oil at 2,350-75 feet.

Max Pary and others' No. 1-A Cline, a twin, NE cor., Section 8-3-10w, Comanche County, found 1,500,000 feet of gas at 435 feet, but passed and was drilling at 610 feet. The twin is being drilled for fuel which will be used to continue operation at the No. 1 Cline, which is now shut down at 2,228 feet.

Economies in Leasing

Mid-Continent oil companies are believed to be making considerable headway in their program of rental reductions. Practically every company now has all of its available lease men canvassing the land owners seeking a reduction in the lease rentals. Overhead expenses are being reduced by the oil companies by this method. It is estimated some of the companies have been paying $1,000,000 to $3,000,000 a year in rentals on nonproducing leases. Some express the opinion the amount will be cut in half by some of the companies, by rental reductions and lease cancellations.

Oil companies are attempting to work out a plan for reducing the amount of rentals on undeveloped acreage in wildcat areas where it is believed no development will take place for several years. During the year 1931, land owners and royalty owners may be obliged to look elsewhere for relief as it is beginning to appear the oil companies will have little to offer in the way of revenue during the coming 12 months.

Owing to the strict proration orders curtailing production, it is believed less acreage will be leased in 1931. In fact, it is reported that several of the major oil companies have turned back hundreds of leases that have considerable time to run, mostly in wildcat areas. It has been the custom in years past for land departments of all major oil companies to turn back condemned leases as soon as possible, but this year they are all going a little farther and looking into the future by cleaning off unproved holdings which appear to have little chance of being tested for some time. Leases with eight or nine years to run are the ones that are affected the most. In some cases it is reported that portions of large blocks are being turned back to land owners with the companies retaining a checkerboard on what is considered the most promising part of structures.

The move to reduce rental prices is gaining favor among oil companies. The general average rental in the past has been $1 an acre a year, but efforts are now being made to reduce the amount to 50 cents, and even 25 cents an acre a year. Large blocks of acreage have been taken in the western part of the State since the Oklahoma City Field was discovered, resulting in enormous expenditures for rentals each year for wildcat acreage that will probably not be developed for several years, or until the large overproduction of crude oil in the United States has been used up. Major oil companies are working out a uniform plan to present to land owners to reduce the amount of rentals on leases they already own, and where the land owner is not satisfied the lease is cancelled. Some companies have reduced acreage holdings to at least one-half in the last few months

Good Well in West Chandler

The West Chandler area is again in the limelight with an extension well making 100 bbls. an hour, which may be increased with deeper drilling. It is Tom Slick Oil Co.'s No. 1 Althoff, NE cor. NW, Section 18-14-4, Lincoln County. The new well extends production a half mile south and several new locations have been made in consequence of this. Magnolia Petroleum Co. has announced two locations offsetting the well, Magnolia Petroleum Co.'s No. 1 Wagner, NW cor. NE, Section 18-14-4, east offset, and No. 1 Telford, SW cor. SE, Section 7-14-4, northeast offset. The Tom Slick Oil Co. and others own the north offset lease.

The West Chandler area has been the scene of spasmodic plays during the past several years. The first of importance was recently when the Wilcox sand was discovered to be productive in Section 7-14-4, where large wells were found. The curtailment plan has slowed down development in the area.

In Noble County

Sinclair Oil & Gas Co. announces a new location in the Perry area in Noble County. It is the fifth location to have been made in the area the last two weeks. Two tests are nearing the pay horizon. Sinclair Oil & Gas Co.'s No. 2 Waltermire, NE cor. SW SE, Section 33-21-1w, is a location in the Waltermire gas pool and will be drilled with rotary tools. Empire Oil & Refining Co.'s No. 2 Freyler, SE cor. SW NE, Section 4-20-1w, has been completed for 3,500,000 feet of gas at a total depth of 3,444 feet. Washoma Petroleum Co. and others' No. 1 Otoe, SE cor. NE SW, Section 22-22-1, spudded and has landed surface pipe at 150 feet. Magnolia Petroleum Co.'s No. 1 Roberts, NE cor, SE, Section 21-21-2w, is spudding. The test is located 6 miles west of Perry in the Magnolia Pool. Same company's No. 3 Young, SW cor. NW, Section 22-21-2w, was drilling at 2,500 feet.

Twin State Oil Co.'s No. 1 Steward, SE cor. NE, Section 5-20-1w, was spudding. Magnolia Petroleum Co.'s No. 2 Summers, SE cor. SW NW, Section 4-20-1w, was drilling in the gas sand at 3,444 feet.

Prairie Oil & Gas Co.'s No. 1 Upperman, SW cor., Section 22-22-1, was drilling deeper at 3,850 feet. The Layton sand where production was expected carried water. Other locations awaiting the outcome of the Prairie Oil & Gas Co.'s No. 1 Upperman, were Peerless Oil Producing Co.'s No. 1 Otoe, NE cor. SE, Section

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WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Shut down 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Drlg. 5,125 ft.

ATOKA COUNTY

Edgerton-Edwards' No. 1 Roland, C NW Sec. 9-1-15	Shut down 750 ft.

BECKHAM COUNTY

Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w	Drlg. 800 ft.
Mid-Continent's No. 1 Schaff, C NE SW Sec. 22-11-22w	Waiting on cement to set 480 ft
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-2-22w	Shut down 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	Drlg. 2,730 ft.

BLAINE COUNTY

Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	Drlg. 4,990 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	Shut down 1,115 ft.

COAL COUNTY

McGraw Oil Co.'s No. 1 Ward, NE SE Sec. 35-1-8	Rig.
Whitney et al's No. 1 Miller, SE NE Sec. 10-2-8	Shut down 760 ft.

COMANCHE COUNTY

Croy & Young's No. 1 Cline, NW NE NE Sec. 9-3-10w	Shut down 2,221 ft.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	Shut down 1,450 ft.

CREEK COUNTY

Burton-Holmes et al's No. 1 Sankeye, SE SW SW Sec 5-18-10	Shut down 540 ft.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	Drlg. 5,835 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w	Shut down 100 ft.
Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e	Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE NW Sec. 10-9-18e	Shut down 2,387 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 23-7-21w	Shut down 1,490 ft.

HARMON COUNTY

Harmon-Tex Oil Co.'s No. 1 Hoadley, NE cor. Sec. 17-4-24w	Shut down 2,593 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w	Shut down 625 ft.

HARPER COUNTY

Empire's No. 1 Bruce, C NE SW Sec. 12-25-20w	Shut down 7,935 ft.

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"The cracking process has done more for conservation than any legislative scheme which could be put into effect under our constitutional system."

Charles Evans Hughes said that when he appeared before the Federal Oil Conservation Board in Washington, May 27, 1926, as representative of the American Petroleum Institute

It was true then and it is true now

Mr Hughes was talking about conservation of oil in the ground But cracking does more than

that It's the best way to conserve profits, too

The cracking process which does the most for conservation of oil *and profits* is the one which cracks any kind of stock to make the biggest yield of the best gasoline at lowest cost

The Dubbs process does that

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Potential Voshell Pool, Kansas, Declines

Drops Nearly 60 Per Cent Since Last Previous Test. McPherson, Rooks and Rice Counties Promising Areas

By W. A. Spinney
Staff Correspondent, Kansas Fields

A gain of approximately 5,000 bbls. a day was registered during the week ending February 7 in Kansas crude oil production. The increase is mostly from the Voshell Pool, in McPherson County, which has been taking new potentials and shows an average of 18,000 bbls. a day for the same seven days.

The discovery of another high gravity pool in western Kansas was indicated during the week by the showing in Muth Brothers' No. 1 Beyers, NE cor. NW. Section 21-19-9w, Rice County. In a few hours the oil rose 600 feet in the 6-inch hole from the Silicious lime at 3,213-15 feet. The drilling was to continue and at last report the hole was bottomed at 3,235 feet, with the oil show increasing. The oil tests 45 degrees, corrected. A production test was to be made after it has been drilled a few feet deeper. It bailed one bailer of oil an hour from a total depth of 3,215 feet. Three miles north of the well another wildcat test found oil several months ago. It was the Shell Petroleum Corp. and others' No. 1 Ploog, in Section 33-18-9w, which was completed and estimated at 2,000 bbls. a day at the time. It was shut in on account of the lack of pipe line connections. Both wells are believed to be on the same trend of folding known as the Ellsworth Arch.

The new potentials from the Voshell Pool in McPherson County indicate the pool has declined since the previous gauges taken four months ago. On January 1 the potential of the area was estimated to be 69,639 bbls. from 94 wells by State Umpire T. C. Johnson, and the average potential of four days taken February 1, 2, 3, 4, showed 28,637 bbls. from 96 wells, a decline of nearly 60 per cent.

Proration in the Voshell Pool has been under discussion for several months and operators in the area have agreed to limit the production after February 1 to the maximum amount of production any one company wants to ship from its leases. According to the new potentials the production from the Voshell Pool will be practically without any restriction.

The Sinclair Oil & Gas Co.'s two properties in the Voshell Pool under the new potential gauges show a total of approximately 3,873 bbls. a day, and the company announced it wanted to ship 4,000 bbls. of oil a day from the area for 10 days which would allow all the other operators to produce their leases in the same proportion.

The first four days in February the potentials were as follows: February 1, 31,886 bbls.; February 2, 29,377 bbls.; February 3, 26,921 bbls.; February 4, 26,365 bbls. from 96 wells. Under the former curtailment plan the production was limited to 18½ per cent of the potential.

Greenwich Wide Open

The curtailment of production in the Greenwich area in Sedgwick County was removed during the week and all the producing wells will be allowed to flow wide open. The area has been under proration for approximately two years under an agreement between the Shell Petroleum Corp. and Gypsy Oil Co. The area has 14 producing wells which have been averaging around 2,400 bbls. a day. The lifting of proration, it is estimated, will increase the production to 3,500 bbls. a day. The Greenwich Pool was discovered by the Shell Petroleum Corp. in April, 1929, and two producing horizons have been found, the Viola and Simpson.

Rooks County Is Promising

Another area in western Kansas expected to develop into an active field is in Rooks County. Seeley, Boysen and Aylward's No. 1 Silvers, in Section 21-8-19w, which was completed several months ago and after a swabbing test made 350 bbls. of oil a day and was shut in awaiting the completion of a 4-inch gathering line is now on production. A pipe line was constructed from the well to Zurich, and the oil is now being shipped out in tank cars. Two tank cars a day are being shipped to Kansas City. The well is believed to be increasing its gas and oil production, and has made several flows of oil through the tubing due to the well drilling itself deeper into the pay horizon. It is believed offsets will be started in the near future and if these tests find commercial production a drilling campaign may follow.

In the shallow areas in the eastern part of the State some relief has been given the operators by different pipe line companies. In Anderson County, the Stanolind Crude Oil Purchasing Co. is buying approximately 200 bbls. a day of distress oil. While this is not all the distress production in the area the other producers expect to be given relief in the near future. The Skelly Oil Co. and the Standard Oil Co. of Kansas have been active in helping the producers in Greenwood County.

Gas Test in Rice County

A test for gas was announced during the week by W. R. McFadden and others for No. 1 Jennings, SW cor. NE NW. Section 29-18-6w, Rice County, on Shell Petroleum Corp. acreage. The gas is expected to be used to supply towns in the eastern part of Rice County and western McPherson County. A deep test drilled by the Shell Petroleum Corp. several months ago found a gas horizon at approximately 1,500 feet and the new test is expected to be completed in this sand.

A deep test is being made in the horizons below the gas formation in Stevens County. Argus Production Co.'s No. 2 Christopher, C NE, Section 10-33-39w, on the west side of the county, was drilling at 4,556 feet. It may be drilled to 7,000 feet.

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARBER COUNTY	
Allison & Fitzwilliams' No. 1 Kumberg, SE SW SE Sec. 2-30-12w	Shut down 4,801 ft.
BARTON COUNTY	
Syndicate Oil Co.'s No. 1 Boertz, NW SE SE Sec. 13-18-12w	Shut down 50 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w	Shut down 1,800 ft.
McCool et al's No. 1 Tsern, NW SE NE Sec. 12-20-11w	Shut down 1,600 ft.
BUTLER COUNTY	
Farrell et al's No. 1 Sutton, NW cor. Sec. 18-28-7	Drlg. 2,435 ft.
CLARK COUNTY	
Watchorn's No. 2 Morrison, NW NE Sec. 20-32-21w	T. D. 6,909 ft.; plugged back to 6,530 ft. to test show gas; S.D.
CLAY COUNTY	
Crystal Oil et al's No. 1 Tivier, SW cor. Sec. 19-8-2	Shut down 2,390 ft.
COFFEY COUNTY	
Heyburg's No. 1 Kroft, SE SW SE Sec. 30-22-14	Shut down 1,300 ft.
Roberts et al's No. 1 Hay, SW SE NW Sec. 32-22-15	Shut down 1,250 ft.
COWLEY COUNTY	
Fisher et al's No. 1 Hunt, C SW SE SE Sec. 11-34-3	Rig.
Roth & Farout's No. 1 Reedy, SW NW NE Sec. 8-32-8	Shut down 1,040 ft.
Tom Fine's No. 1 Boyd, NW NE Sec. 23-32-4	Shut down 2,650 ft.
DICKINSON COUNTY	
Severs et al's No. 1 Lavengood, NE SW Sec. 13-13-2	Drlg. 3,592 ft.
ELLSWORTH COUNTY	
Gilmore Oil et al's No. 1 Sturm, NW SW Sec. 31-17-9w	Rig on ground.
Hershey et al's No. 1 Schultz, C NE Sec. 9-14-8w	Rig.
Alyward et al's No. 1 Stratman, SE NW SE Sec. 1-17-10w	Shut down 50 ft.
Aladdin Pet.'s No. 1 Stoddenberg, C SW Sec. 22-16-10w	Shut down 1,130 ft.
Milton et al's No. 1 Kester, SE NE Sec. 6-14-9w	Drlg. 880 ft.
Aladdin and Carter Oil Co.'s No. 1 Barecky, C NW Sec. 3-16-10w	Drlg. 3,200 ft.
FORD COUNTY	
Swain et al's No. 1 Taylor, C NW Sec. 21-25-24w	Shut down 4,315 ft.
GOVE COUNTY	
Johnson and Atlantic's No. 1 Wright, SE NE Sec. 11-12-27w	Drlg. 4,550 ft.
Valerius & Baucher Oil Co.'s No. 1 Todd, NW cor. Sec. 24-13-27w	T. D. 4,813 ft. in dolomite; aband
GRAHAM COUNTY	
Schleimeyer et al's No. 1 Clark, SW NE NE Sec. 11-9-25w	Fishing 3,790 ft.
GREENWOOD COUNTY	
T. K. Simmons' No. 2 Barnard, SW SE SE Sec. 19-22-12	Drlg. 650 ft.
HARPER COUNTY	
Beeler et al's No. 1 Bear, C NE Sec. 21-36-6w	Shut down 1,830 ft.
HARVEY COUNTY	
Empire-Shell's No. 1 Showalter, NW SE Sec. 23-23-2w	Spudding.
KINGMAN COUNTY	
Skelly Oil's No. 1 Miles, NE cor. Sec. 30-27-10w	1,635-40 ft. 2,000,000 ft. gas, at 2,005-20 ft. 6,000,000 ft. gas; at 2,133-42 ft. 3,000,000 ft. gas; showing oil 3,385 ft.; T. D. 3,441 ft.; S. D.; estimated at 600 bbls. a day.
KIOWA COUNTY	
Phillips-Prairie's No. 1 Bean, NE SE Sec. 10-30-17w	Drlg. 5,350 ft.
McKenna et al's No. 1 Ralston, C NE Sec. 14-28-20w	Rig.
LYONS COUNTY	
Griffith et al's No. 1 King, NW cor. Sec. 8-19-10	Shut down 910 ft.
MARION COUNTY	
Aladdin Pet.'s No. 1 Koch, NW NE Sec. 36-17-3	Rig abandoned.
Midwell's No. 1 La Master, NW cor. Sec. 31-22-4	Shut down 650 ft.
McPHERSON COUNTY	
United Pet. Co.'s No. 1 Kaigi, NE cor. Sec. 20-19-1w	Drlg. 2,914 ft.
Henderson & Holden's No. 1 Sommerfield, NE NW Sec 23-19-1w	Drlg. 2,954 ft.; showing 25 bbls. of oil and 50 bbls. of water a day.
Aladdin Pet.'s No. 1 Rudolph, NW NE Sec. 36-18-3w	Rig.
Slick et al's No. 1 Randall, C SW SW Sec. 35-17-3w	Drlg. 3,005 ft.
Aladdin Pet. Co.'s No. 1 Larson, C NW Sec. 22-18-4w	Rig.
MORTON COUNTY	
Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22-34-43w	Fishing 5-in. csg. 3,460 ft.
MORRIS COUNTY	
Great Basin Oil Co.'s No. 1 Ballyntine, SW SE SE Sec. 18-16-5	Underreaming 1,645 ft.
Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7	Machine.
Hankerson et al's No. 1 Cessman, SW SE Sec. 24-16-9	Rig.

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An extension to the Eastborough Pool was in prospect in the National Refining Co. and others' No. 3 Murdock, NE cor. SE SE, Section 18-27-2. The chat was found at 2,954 feet and 1 foot in the test was showing oil.

In Russell County

A semiwildcat test in Russell County swabbed 300 bbls. of oil in 18 hours. Prairie Oil & Gas Co. and Slick, Pryor and Lockhart's No. 1 Hifferman, SW cor. NE, Section 26-15-13w, near the Sellens Pool, is estimated to be a 500-bbl. well after swabbing 300 bbls. in 18 hours from the Silicious lime at 3,326-46 feet. Signal Oil Co. and others' No. 1 Sellens, NE cor. SW, Section 26-15-13w, a diagonal offset, was underreaming the 6-inch casing at a total depth of 3,316 feet. The top of the Silicious lime was found at 3,303 feet.

Ritz Extended

The Ritz-Canton Pool in McPherson County has increased in size until it now stretches out into the townships north, northeast and northwest of the discovery well. It is believed to be the most promising area in the State and the deep producing sand found in the Canton area gives the area added importance. The discovery well in the Ritz Pool found oil in the chat, which yielded large flush production but soon declined. The deep sand has been found to be a steady producer in other areas in the county.

The deep sand production is coming from four wells in the center of Section 30-19-1w, which some express the opinion is the Viola. Other development is being delayed until the market improves. A half mile north a test is being drilled by C. B. Davis and others, SE cor. SW Section 19-19-1w, to test the deep pay. The test is drilling below the chat and it is expected to reach the deeper pay sand in a few days.

The Darby Petroleum Corp.'s No. 1 Kaegi, NE cor. Section 20-19-1w, more than 2 miles from the nearest production, found approximately 2,000,000 feet of gas in the chat at 2,935 feet.

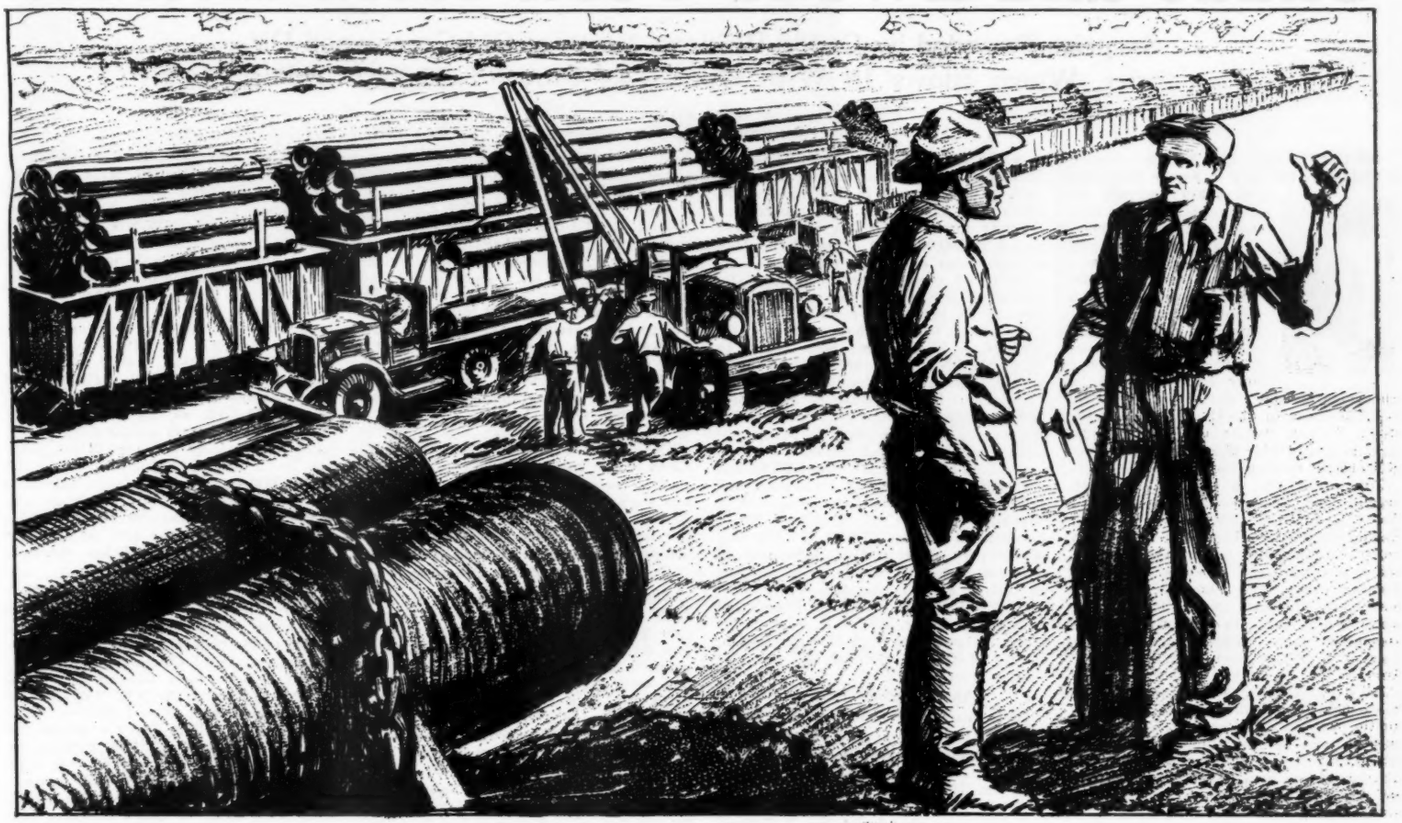
Northwest of the oil development is the Decker gas field, which has 19 completed wells with an estimated potential of 450,000,000 feet of gas a day. Gas wells completed in the area have produced up to 48,000,000 feet a day.

Tidal Oil Co. and others have a rig up for No. 1 Day, SW cor. NW SW Section 32-19-1w, McPherson County, in the northeast extension to the Ritz Pool. United Petroleum Corp. and others' No. 1 Blair, NW cor. Section 32-10-1w, is drilling at 2,100 feet. Phillips Petroleum Co., Twin State Oil Co. and others' No. 1 Wiles, SE cor. NE Section 25-19-2w, is spudding. It is located a half mile west of the deep sand wells in Section 30-20-1w. In the Decker gas area, Madison Petroleum Corp and Shell Petroleum Corp.'s No. 1 Peterson, C SE SE Section 1-19-2w, was preparing to spud. Same operators' No. 1 Russell, SW cor. SE Section 1-19-2w, spudded and shut down. Moriarty and others' No. 1 Sedy, SW cor. Section 2-19-2w, is spudding. J. Rush and others' No. 1 Johnson, C SE NW Section 10-19-2w, was drilling at 1,500 feet. W. C. McBride, Inc.'s No. 2 Giffin, C SE SW Section 14-10-2w, was drilling at 1,720 feet. Shell Petroleum Corp. and Lario Oil & Gas Co.'s No. 1 Beal, SE cor. NW Section 24-19-2w, is rigging up.

The following tests were active in the Ritz Pool area of McPherson County: Syndicate Oil & Gas Co. and Shell Petroleum Corp.'s No. 1 Becker, SE cor. Section 36-19-2w, was drilling at 700 feet. Jones and the Shell Petroleum Corp.'s No. 1 Holmes, NE cor. SE NW

(Continued on Page 111)

TRAINLOADS OF STEEL...



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Caddo and Zwolle Tests Hold Interest

Surprise Provided by Caddo Wildcat, North of Old Greenwood District, Which Blows In With Open Gas Flow of 35,000,000 Feet

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Feb. 9.—Gas in a Caddo wildcat and a Zwolle semiwildcat again featured developments in this division. There were plenty of dry holes and abandoned locations, most of them in Zwolle territory, one gasser in Richland and a deep producer in the Clarksville district of Johnson County, Arkansas; but only two producers in the whole division, Marine Oil Co.'s No. 3-B Thompson in the SE NE, Section 10-18-13, Urbana district of Union County, Arkansas, and The Texas Company's No. 8 Herndon, Section 14-21-15, Caddo.

Junior Oil Co., a Belchic & Laskey organization, produced a surprise when No. 1 Breard, SW SE, Section 9-18-16, Caddo, blew in. The well is located north of the old Greenwood district, where gas has been produced from two horizons, and approximately 13 miles northwest of Shreveport. It blew in while coming out with drill stem and the incomplete gauge made gave it an open flow of 35,000,000 feet at 1,100 pounds from 10 feet of sand at a total depth of 2,780 feet. Numerous deep and shallow holes have been drilled in that territory in the past, on all sides of this location, one of them by the Standard, a gasser at 2,720 feet. The main body of the Greenwood gas area, however, which did not last long before salt water broke in, was much farther south and west.

Rodessa District Gasser

No further gauge of United Production Co.'s big Trinity gasser in the new Rodessa district of Caddo, No. 1 Wall, Section 33-23-16, has been made, and it is listed as a 75,000,000-foot producer at 2,330 pounds from 18 feet of sand, total depth 5,522 feet. Meanwhile the company has made location for No. 1 Emmons, in the SE SW, Section 27-23-16, just north of No. 1 French in Section 34, which was the second of three gassers in the district. The Texas Company's Pine Island producer in Caddo was finished as a 25-bbl. pumper at 3,902 feet to which it was deepened from 3,682 feet. It was a third completion for the same well. The first was in September, 1928, while Pine Island was having a revival. It blew out at 3,650 feet with an estimated 10,000,000 feet of gas 1,500 bbls. of salt water and 1,000 bbls. of oil, set a string of casing to cut off the water and was brought back two months later flowing 500 bbls. of oil from 3,665 feet.

A caddo wildcat that will probably hold much interest has been begun by R. E. Davidson and others of Shreveport on the Felix Weiller land in Section 33-17-13 about 5 miles south of Shreveport and not far from the old Cedar Grove gas area. Davidson and his associates have a block of several thousand acres in and adjoining the Cedar Grove Field and are said to be planning both deep and shallow tests. The one remaining test in Bienville Parish, Coyle Brothers' No. 1 Lawhon, in Section 15-16-8, 2 miles east of the post office of that name and 12 miles southwest of Gibsland, is reaming to bottom after coring salt water sand from 2,581-95 feet. United Production Co.'s No. 1 Treat, NW NE, Section 14-17-12, Sligo district of Bossier Parish, gauged 4,000,000 feet of gas at 630 pounds from 1,765 feet.

Another Holly Failure

Holly district of DeSoto Parish developed another failure when Standard Oil Co. abandoned No. 5-A Farmer, SE SW, Section 32-14-13, as a dry hole in red shale at 2,920 feet. Five miles southwest of Holly production, J. W. Clark and associates abandoned No. 1 Tidwell in the NW cor., Section 22-14-14, dry at 2,655 feet. This wildcat had 12 feet of oil sand 2,938-50 feet, that made a show but failed to make good when bailed. There was another small show at 3,084 feet, and at 3,096 feet it blew out with an estimated 5,000,000 feet of gas and a spray of oil but went dead shortly afterward. Cleaned out, it had 1,300 feet of oil in the hole when it started swabbing and swabbed to bottom. Oil rose 300 feet over night and two days later there was 500 feet of fluid, 80 per cent water, in the hole. Drilled to 3,130 feet it filled up with water and a show of oil and gas and was plugged back a few feet and subsequently deepened to 3,655 feet where it was given up.

Cooper and others' No. 2-A Cooper in Section 32-11-10, Natchitoches Parish, 10 miles south of Bull Bayou production in Red River Parish, was arranging to make a drill stem test on a show of oil and gas at 1,515 feet; No. 1, in Section 35-11-10, ran a test at 2,832 feet which was dry and was coring at 2,840 feet. Lucky Strike Oil Co. cemented back to 2,900 feet on No. 1 Chaffraix in Section 33-12-10, 6 miles north of the Cooper 2-A Cooper, and was arranging to test from 2,800-2,900 feet. A drill stem test a month ago resulted in 500 bbls. of water with a show of gas and light oil. Total depth of the hole is 3,010 feet. Richland Parish' one completion was Southern Carbon Co.'s No. 1 Hixson, SE SE, Section 33-16-6, just inside the southern limit of the field. It gauged 37,656,000 feet of gas at 800 pounds from 2,444 feet.

Hope for a Zwolle Producer

There is some hope that H. W. Perritt's No. 2 Bowman-Hicks, SE NE, Section 2-7-12, Zwolle, may develop into a producer as Loring Oil Co.'s No. 15 Bowman-Hicks, a quarter mile southwest, did last week. The Loring well blew in from 2,248 feet with an estimated 18,000,000 feet of gas, and a spray of oil. It was deepened to 2,263 feet and finished as an 8,500-bbl. producer. Perritt's well blew in with an estimated 20,000,000 feet of dry gas at 2,275 feet with most of the drill stem in the hole and plans were to get the rest of this pipe out of the hole, kill the gasser if it did not start producing after blowing a reasonable length of time and make a few feet more hole. Both these wells had more gas than any other that has been drilled in Zwolle since the discovery well, are the shallowest in the district, measured from the surface, and serve to close up some of the vacant territory between the discovery and this particular "Section 2 hickey" which is one of several highly localized, widely scattered, groups of producers that comprise Zwolle.

Less than a mile east of them T. D. Shaw abandoned No. 1 Sabine Lumber Co. in the SW SW, Section 1-7-12, at 2,683 feet as a dry hole, with no shows all the way down, and W. M. Coates abandoned locations for No. 2 Sabine Lumber Co. in the NW SW and No. 2-B Sabine Lumber Co., SW SW. Frank Melat and others' No. 1 Sabine Lumber Co., SW SW, Section 6-7-11, dry at 2,500 feet and No. 2 Sabine Lumber Co., NE NW, Section 14-7-12, dry at 2,560 feet, both within a mile of production. Location for Longoria and others' No. 1 Belton, SE NE, Section 31-9-13, was abandoned as a location. J. C. Walton junked No. 1 Sabine Lumber Co., NE cor. NW, Section 11-7-12, at 1,310 feet, half a mile from production and skidded 15 feet to start new hole. Gherig Oil Co., drilling No. 1 Miller, NE SW, Section 16-18-10, Webster Parish, a rank wildcat 8 miles southwest of Minden but in an area where geophysical surveys gave favorable results, abandoned the test as a duster at 3,508 feet, 500 feet below contract, without having had a show.

Block 7,500 Acres in Caldwell Parish

Carter Bell and others of El Dorado have block approximately 7,500 acres centering on Section 17-14-4, Caldwell Parish, just south of Columbia, and are reported to have made location on the R. A. Taylor farm in the NW NW, Section 16-14-4, for a well to go 4,200 feet. Last week, Prairie Oil & Gas Co. abandoned No. 1 Shackelford, SE NE, Section 30-23-5, Claiborne Parish, the first of a series of three deep tests it was reported it was to drill on the Tom Slick 76,000 acres solid block in which it had a half interest.

When and where the next of the three is to be located and started, if at all, has not been learned. However, the company's local representative has taken up permanent residence in Shreveport and the company is reported offering land owners 50 cents an acre per year renewal for the next two years.

Test of Smitherman & McDonald's No. 1 Reed, NW NW, Section 16-15-22, in the extreme northeast corner of LaFayette County, Arkansas, approximately 15 miles southwest of Nevada County pro-

(Continued on Page 114)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

BOSSIER PARISH—BELLEVUE

Company, farm and location— Remarks—
H. I. Morgan's No. 12-B Kendrick, 2,440 ft. E, 1,720 ft. N, SW cor., Sec. 32-19-11 ..... Cored black shale 1,865 ft.

BOSSIER PARISH—CARTERVILLE

Del.-La. Dev. Co.'s No. 6 Bollinger, 330 ft. S, 220 ft. W, NW cor., Lot 17, in Lot 16, Sec. 31-23-11 ..... Hole full oil; W.O.S.R; 15 ft. broken sand; T.D. 3,217 ft.

BOSSIER PARISH—SLIGO

United Prod. Co.'s No. 2 Schnitt, 660 ft. E, 1,980 ft. S, NW cor. NE, Sec. 14-17-12 ..... Derrick.

CADDO PARISH—GREENWOOD

Calatex O. & G. Co.'s No. 1 Edgar, 1,460 ft. S, 1,900 ft. E, NW cor., Sec. 17-16-16 ..... Location.
Calatex O. & G. Co.'s No. 1 McAnn-Alfred, 1,310 ft. S, 970 ft. E, NW cor., Sec. 17-16-16 ..... Location.

CADDO PARISH—MOORINGSPORT

Falcon Oil Co.'s No. 5 Nunnally, 2,379 ft. N, 3,849 ft. E, SW cor., Sec. 29-20-15 ..... Rig up.

CADDO PARISH—OIL CITY

Trio Corp.'s No. 1 Levee Board, 212 ft. S, 500 ft. E, NW cor., Sec. 17-20-15 ..... Derrick.

CADDO PARISH—PINE ISLAND

Haynes Bros.' No. 2 Spell, 956 ft. W, 200 ft. N, SE cor. SE, Sec. 15-21-15 ..... Fishing bailer; T.D. 3,962 ft.
Shreveport Oil Corp.'s No. 7 Hicks, 1,100 ft. N, 1,200 ft. W, SE cor. NE NW, Sec. 32-21-15 ..... Cmtd. 6⅝-in. 1,252 ft.

CLAIBORNE PARISH—HOMER

La. Oil Ref. Corp.'s No. 1 Langston, 660 ft. S, 528 ft. E, NW cor. SW SW, Sec. 19-21-7 ..... Drlg. hard sand 3,488 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 900 ft. W, 330 ft. S, NE cor., Sec. 2-20-4 ..... Began drlg. Jan. 21; cmtd. 12½-in. 162 ft; 8-in. 1,100 ft.

OUACHITA PARISH

Bahan & Bahan's No. 1 Smith, 249 ft. W, 525 ft. N, SE cor. SW, Sec. 24-18-2 ..... Cmtd. 6-in. 2,047 ft.
Jordan Drlg. Co.'s No. 7 Cole, 265 ft. S, 1,459 ft. W, NE cor., Sec. 49, in Sec. 50-18-4 ..... Location (reported drlg. in error).
United Carbon Co.'s No. 6 Spade, 1,130 ft. S, 140 ft. E, NW cor., Sec. 27-19-4 ..... Location.

(Continued on Page 92)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

BIENVILLE PARISH

Company, farm and location— Remarks—
Coyle Bros.' No. 1 Lawhon, 300 ft. N, 300 ft. E, SW cor. SE NE, Sec. 15-16-8 ..... Cored S.W. sand 2,581-95 ft; reaming to bottom.

BOSSIER PARISH

Andrews & Davlin's No. 1 Nattin, 100 ft. N, 250 ft. W, C, Sec. 15-22-14 ..... Arranging test; T.D. 2,100 ft.
Rombaugh et al's No. 1 Allison, SW SE, Sec. 10-19-13 ..... Set 6⅝-in. 1,031 ft; dry; arranging to deepen; T.D. 1,600 ft.
R. O. Roy's No. 1 W. H. Hodges, C NW NW, Sec. 19-16-10 Rig up.

CADDO PARISH

R. E. Davidson et al's No. 1 Weiller, Sec. 33-17-13 ..... Began drlg. Feb. 3.
R. H. Libby's No. 1 Foster (was Gooch et al's), Sec. 29-15-16 ..... Cmtd. 12½-in. 60 ft; S.D. 1,600 ft.
United Prod. Co.'s No. 1 Emmons, 1,337 ft. E, 660 ft. N, SW cor., Sec. 27-23-16 ..... Location.

CALDWELL PARISH

Hudson et al's No. 1 Burton, Sec. 35-12-2e ..... S.D. 2,600 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMillen, 70 ft. N, 100 ft. W, C, Sec. 26-9-6 ..... Tested S.W; W.O. 3,086 ft.

CLAIBORNE PARISH

Baird Bros. et al's No. 1 Whittaker, 600 ft. N, 400 ft. W, SE cor. NE, Sec. 30-20-7 ..... S.D. 2,200 ft.
Baugh et al's No. 1 Alexander, 330 ft. S, 330 ft. W, NE cor., Sec. 27-20-8 ..... S.D. 2,200 ft.

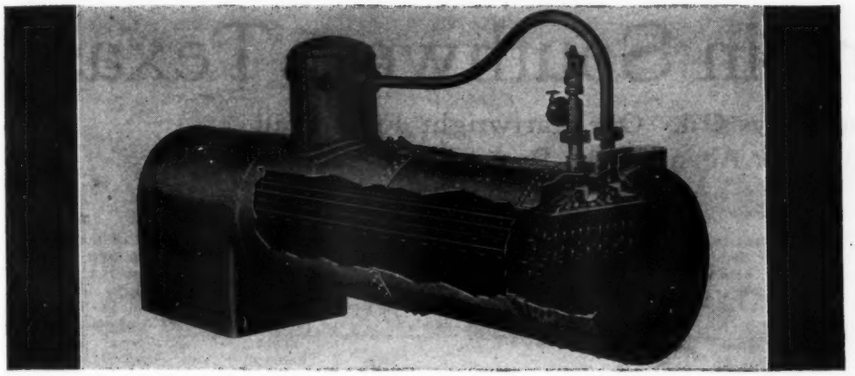
CONCORDIA PARISH

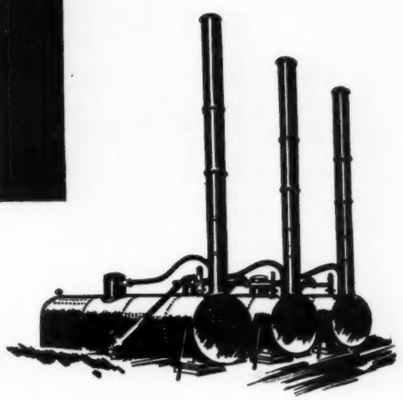
Ark.-La. P. L. Co.'s No. 1 Alexander, SE cor. S½, Sec. 47-8-9 ..... Began drlg. Jan. 23; cmtd. 12½-in. 263 ft; drlg. 700 ft.
Joe Marr et al's No. 1 Maxwell, C, Sec. 35-3n-8e ..... S.D. 3,622 ft.

DESOTO PARISH

Dupree-Fountain's No. 1 J. M. Nabors, 250 ft. S, 250 ft. W, NE cor. NW cor., Sec. 5-13-11 ..... Derrick.
S. A. Guy's No. 1 Dowling Bros., 469 ft. E, 332 ft. S, NW cor. NE, Sec. 31-14-14 ..... S.D; sandy shale 1,354 ft.
Keatchie O. & G. Co.'s No. 1 Hallie Smith (was H. E. Weichert's), NE SE, Sec. 31-14-15 ..... S.D; repairs 2,306 ft.
C. D. Neff et al's No. 1 H. P. Dowling, 240 ft. N, 240 ft. W, SE cor., Sec. 18-13-14 ..... Cored sandy shale 2,928 ft.

(Continued on Page 90)





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Increased Work in Southwest Texas

Saxet Field Extension Sprays Oil. One Cartwright Field Well Making 25 Bbls. and Another Abandoned. Penn Pool Producer

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Feb. 9.—There was more drill stem turning around the past week in Southwest Texas and less standing idle than at any time since the holiday season slowed things up. However, the total gross results were lacking in outstanding developments.

In the coast counties, Moody-Seagraves Producing Co.'s No. 1 Smith reported last week as plugging back from 4,961 feet to 4,060 feet in the hope of making a gas well did better than expected. It came in for about 40,000,000 feet of gas with pressure of 1,600 pounds and sprayed about 40 bbls. of oil. It has since been shut in to wait an outlet. The well is about 2 or 3 miles west of the Saxet Field and is in the area where Houston Oil Co. recently completed its No. 1 Hunter at about the same depth and with about the same production, the first 4,000-foot producer in that part of the county.

Thirty-five miles northwest of the Saxet Field in southeastern Live Oak County, Houston Oil Co. last week was completing No. 1-A Boothe at 5,277 feet. The well was put on gas lift using gas from the Cartwright Field and is making 25 to 30 bbls. a day. There is some speculation that when kept on production the flow will increase. Anyway it is the first oil well completed within a radius of 25 or 30 miles and has that much importance. It is on a line a little nearer to the coast line than the Pettus production, if that means anything, the Pettus production being nearer to the contact of the Reynosa with the Oakville and No. 1-A Boothe being nearer to contact of the Reynosa with the Beaumont clay.

No. 1-A Boothe is two or three locations north of the Cartwright gas field and producing from a sand twice as deep. No. 22 Cartwright was reported last week as having plugged back from 6,028 feet to 1,609 feet to a shallower gas sand than is producing in the field, but this week it was abandoned, and the rig is being torn down.

The sum total of the Houston Oil Co.'s efforts thus far to get deep production in the Cartwright gas field is the No. 1-A Boothe at 5,277 feet, a small oil well, and the No. 22 Cartwright drilled to 6,028 feet, a failure. The company evidently is not through with the work of testing the deeper sands, however, for its No. 3 Brown Land & Cattle Co. is down 4,200 feet and drilling; its No. 4 Brown Land & Cattle Co. is down 3,100 feet and drilling, each several hundred feet below the producing sand. The company has another test, No. 3 Dunning, which is rigging up.

Penn's Shallow Bexar Pool

A week ago there was reported quite a lot of unfinished business in the way of more or less important tests in process of being completed. Among them was Penn Oil Co.'s No. 2 Cooksey, the second producer in the field opened by Penn Oil Co. in eastern Bexar, just south of the Southern Pacific Railroad. At total depth, 1,480 feet, it pumped 41 bbls. of 36 gravity oil in 20 hours from sand topped at 1,385 feet, which about duplicates the performance of No. 1 Cooksey.

Evans & Gant's No. 1 Love, in southwestern Kerr County, is still unfinished business. The operators completed drilling out the wool plug and got the well back on the pump but had not completed a gauge of what the well would do or tested its performance. Evans & Sprinkle had set 1,200 feet of 10-inch in their No. 1 J. M. Auld, in Real County, Evans & Sprinkle's No. 1 Haby, in Real, was drilling at 1,000 feet, and Gant, Kilgore & Evans were moving in rig for their No. 1 A. D. Auld, all in the region of No. 1 Love.

In the Pettus area, Simms Oil Co.'s No. 2 Holzmark was still unfinished. It started bailing late in week; total depth is 3,562 feet and it seems to be an accepted certainty it will make a gas well like the first one, spraying a little gasoline.

Daily Average Production

Daily average production of the pools in Southwest Texas for the week ending February 7, follows:

Agua Dulce	20
Bexar County	379
Branyon	20
Bruner	13,444
Buchanan	104
Chapman	5,335
Dale	262
Darst Creek	31,974
Kingsville	121
Larremore	15
Luling	9,125
Lytton Springs	725
Manford	150
McMullen County	20
Medina County	22
Mirando district*	14,317
Normanna	28
North Pettus	298
Pettus	7,412
Saxet	120
Somerset	1,344
S.R.C.-Vacuum	142
White Point	44
Yoast	175
Total Southwest Texas	85,596
Week ended January 31	87,857
Decrease	2,261

*Includes Charco-Redondo, Jennings and Mirando Valley of Zapata County; Abercrass, Aviator, Caroline-Texas, Mid-O-Juelos, Schott and Wolcott, Webb County; Alworth, Henne-Winch-Fariss and Randado of Jim Hogg County; Cole, Driscoll, Kohler, Schoolfield-O'Byrne of Duval County.

Northeastern Frio County

A. H. Wray had more bad luck with his No. 1 Burns estate, in northeastern Frio, which was reported last week showing some oil in the Edwards lime. In last week's report they were left fishing for wash pipe. In the meantime the casing collapsed, but they have been able to swedge through it and got back on the fishing job again.

Laredo District

The biggest proposition in the Laredo district was probably the purchase by Abercrombie & Harrison of Houston, of the Rycade Oil Corp.'s producing property in the southern part of the Alberca Pool, in the southeastern part of Webb and northern edge of Jim Hogg County. There are 631 acres in the lease, with two gas wells and 10 oil wells on the property, all in Share 5 of the Las Animas grant.

There were two completions in the Laredo district, both in the Escobas-Muckelroy Pool, each for 35 bbls. One was J. I. Newton's No. 2 Trevino, and the other S. R. C. Oil Co.'s No. 12-A Trevino, each in Survey 66.

Out of the 43 tests listed in the Laredo district, 25 were in Zapata County, that district having led the entire Laredo territory for many months, with more than all of the rest of the territory combined.

S. R. C. Oil Co. and Vacuum Oil Co. have decided to try again in Survey 293, in northwestern Duval County, where No. 1 Duval Land Co. came in as a discovery oil well at 1,725 feet. Following the completion of the discovery well one test was drilled 850 feet southwest and proved dry and another was drilled 500 feet east of it and proved dry. The next test, No. 3 Duval Land Co., is 300 feet northeast of the discovery well.

Lowe & Rogers are rigging up No. 1 P. Benavides, Block 5, Survey 11, Zapata County, in the open space between the old Mirando Valley discovery pool on the south and the Aviator Pool on the north and near a gas well drilled some years ago by the Andrews Petroleum Co.

Miscellaneous Deals

In the territory west of San Antonio National Oil Co.'s No. 1 Webster, in Medina County, shut down at 2,618 feet in Edwards lime topped at 2,434 feet. It showed a little oil. There is a prospect this test will drill to the Trinity. The well is a couple of miles east of the Adams gas field which is producing from shallow sands at around 1,000 feet.

There is to be another test in west central Bee County in the vicinity of No. 1 Thies, a failure, drilled by T. B. Slick interests. The new test will be

(Continued on Page 114)

SOUTHWEST TEXAS PROVEN AREAS

UNIT POOL—BEXAR COUNTY

Company, farm and location— Remarks:
Penn Oil Co. No. 2 Cooksey, 400 ft. NE No. 1 ..... T. D. 1,480 ft.; comp. 20 bbls.

DOBROWOLSKI POOL—BEXAR COUNTY

Morgan Bros.' No. 3 Masterson, 300 ft. S of No. 2 Masterson, Miguel Gortaris Sur. ..... T. D. 550 ft.; set csg.
Bolling & Michael's No. 1 Adams, Miguel Gortaris Sur... T. D. 700 ft.; (W.O.)
F. H. Eckert's No. 1 Dobrowolski, 400 ft. from W line, 150 ft. from S line of lease, Sur. No. 52 ..... Location.
W. R. Swearingen's No. 2 Halberdier, 300 ft. SE of No. 1, J. Perege Sur. ..... T. D. 742 ft.; comp. 10 bbls.
A. J. Swearingen's No. 6 Sandemer, 600 ft. S of No. 1, M. Manchaca Sur. ..... Location.
A. J. Swearingen's No. 7 Sandemer, 300 ft. S of No. 6, M. Manchaca Sur. ..... Location.

BRUNER POOL—CALDWELL COUNTY

Joe Bruner's No. 1 Malone, A. Floyd Sur. ..... T. D. 50 ft.; spudded.

EDDINGTON POOL—FALLS COUNTY

Eddington et al's No. 2 Llewellyn, George Allen Sur. .... T. D. 973 ft.; drlg. sandy shale.

DARST CREEK FIELD—GUADALUPE COUNTY

Humble Oil's No. 21-A Denman, A. S. Emmett Sur. ..... T. D. 2,590 ft.; comp. 1,100 bbls.
Magnolia Petroleum Co.'s No. 1 M. E. Roamel, J. Robinson Sur. ..... T. D. 2,351 ft.; drlg. (W.O.)
Magnolia Pet. Co.'s No. 7 Klein ..... Set surface casing.
Sun Oil Co.'s No. 13 Knoblock ..... T. D. 1,300 ft.; drlg.
F. L. Thomson's No. 2 Posey, 25 ft. from NW line, 300 ft. from No. 1 ..... Location.

CHAPMAN POOL—WILLIAMSON COUNTY

W. D. Anderson's No. 6-A T. P. Simmons ..... Rig up and shut down.
W. D. Anderson's No. 8 M. V. Lawrence ..... Location.
Bartlett & Wilson's No. 2 R. E. Stewart ..... T. D. 790 ft.; standing.
Bartlett & Wilson's No. 1 R. E. Stewart ..... T. D. 741 ft.; standing.
Chapman et al's No. 1-D Abbott ..... Location.
Chapman et al's No. 2-D Abbott ..... Location.
Chapman et al's No. 2-E Sides ..... Location.
Collins et al's No. 6 Lawrence ..... T. D. 700 ft.; drlg. shale.
J. L. Collins & Co.'s No. 7 M. V. Lawrence, 150 ft. from E line, 215 ft. from S line of 27-ac. tract in the S. Miller Sur. ..... Setting csg.; shut down for water.
E. E. Ertell's No. 7 J. C. Abbott ..... T. D. 100 ft.; standing.
J. L. Collins & Co.'s No. 5 M. V. Lawrence, 150 ft. from W line, 515 ft. from S line of 27-ac. tract, S. Miller Sur. ..... T. D. 1,402 ft.; standing.
Marts and Ertell's No. 1 Abbott, Simon Miller Sur. .... T. D. 70 ft.; fishing.
Sequoia Oil Co.'s No. 7 T. P. Simmons ..... Location abandoned.
G. Stratton's No. 8 J. C. Abbott, 450 ft. from E line, 150 ft. from S line of 32-ac. tract, S. Miller Sur. .... T. D. 1,730 ft.; set csg.

(Continued on Page 111)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location— Remarks:
Cullen and Boren's No. 1 Medina Irrigation, W. Klemke Sur. No. 439 ..... T. D. 2,267 ft.; shut down.

BLANCO COUNTY

H. L. Lewis' No. 1 Glasscock, moving in to drill on leases out of the Rodson block north of Blanco City ..... T. D. 500 ft.; shut down.
Hardy-Sitton's No. 1 McMillan ..... T. D. 570 ft.; shut down (depth corrected).
Liles-Adams et al's No. 1 Stanford, 150 ft. to S line, 1,420 ft. to E line of James Stanford's No. 155 ..... T. D. 840 ft.; drlg.
McCleary et al's No. 1 Schenling, 900 ft. to SE line, 600 ft. to S line of J. A. Rouse No. 118 Sur., 4 miles SW from Blanco City ..... T. D. 562 ft.; shut down.
J. R. Meek's No. 1 Walker, 360 rds. from W line, 482 rds. from S line of 375-ac. tract in Sur. No. 32 ..... T. D. 1,025 ft.; fishing.
Page et al's No. 1 Cox, Rutersville College Sur. No. 18 .. Spudded and shut down.
G. Rosenfield's No. 1 Hohenberger, 800 ft. to W line, 1,250 ft. to N line, Sur. No. 94 ..... T. D. 712 ft.; shut down.

BASTROP COUNTY

Majestic Pet. Co.'s No. 1 J. M. Breeding, 160 ft. from N line, 1,020 ft. from W line of 200-ac. tract, 940 varas from W line, 1,225 varas from S line of M. Andrews Sur., 13 miles W from Smithville ..... T. D. 375 ft.; standing.
Turner-Whorton and Anderson's No. 1 Harris, Joshua Gray Sur. ..... Moving in material.

BELL COUNTY

Milldon Oil Co.'s No. 1 J. K. Edds, Maxiano Moreno Sur.... Derrick.
J. W. Riley et al's No. 1 J. W. Mosely, Maxiano Moreno Sur. ..... T. D. 1,030 ft.; shut down; hole full water.

BROOKS COUNTY

Ed East's No. 3 B. Garcia, 150 ft. from N and W lines of Blk. 5, Share A-1, Las Mastena y Gonzalene grant ..... T. D. 1,002 ft.; standing.

BEE COUNTY

Hurlbut et al's No. 1 Mrs. D. Chestnut ..... T. D. 5,010 ft.; shut down.
E. S. Price's No. 1 Weiss, 200 ft. each way out of NW cor. of B.&B. Sur. ..... T. D. 4,423 ft.; preparing to swab.
E. S. Price's No. 2 Weiss, 900 ft. due SW of No. 1 Weiss, B.&B. Sur. ..... T. D. 4,546 ft.; testing.
E. S. Price's No. 3 Weiss, 900 ft. due NE of No. 1 Weiss.. Location.
Cosden Oil Co.'s No. 1 Stoltzfus, 2,310 ft. S and E lines of Sec. 14, Rangley Subd. of C. Miller ranch, Uranga Sur. ..... T. D. 4,500 ft.; shut down.

(Continued on Page 111)

Reducing Installation and Maintenance Costs in Oil Piping

"WHAT is the nearest possible approach to the perfect piping installation?"

In answering this question, the engineers of oil companies producing more than 85% of the nation's production have settled upon welding, with Tube-Turns, the *stock* fittings for pipe welding.

Here's how they reason: The nearest approach to the perfect system is one in which there are no joints or fittings of any sort. By the use of welding, however, joints can now be made so perfectly that, to all intentions, the piping becomes a single unit.

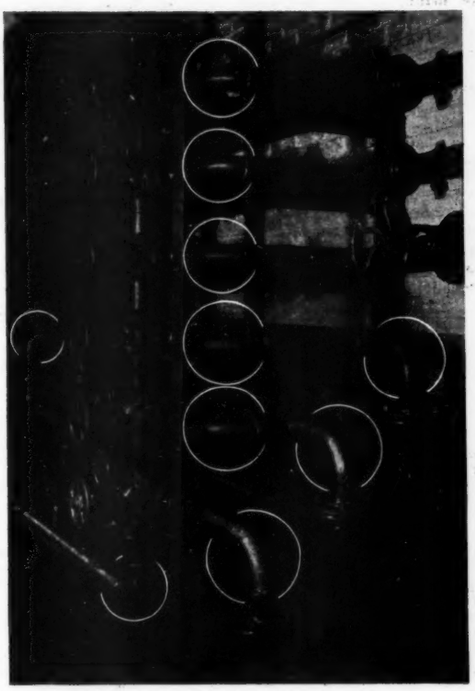
And, when Tube-Turns are used, *the fittings become the strongest part of the piping system.*

Advantages of TUBE-TURNS

Standard Tube-Turns have all the characteristics and dependability of the pipe in the line—are actually short sections of tubing, forged in arcs instead of in straight sections. Tube-Turns are *seamless,* have uniform walls (no buckling or thickening of inside walls, no thinning of outside walls—cross-section full pipe size throughout the turn). *No stresses or strains are set up in the metal by manufacture.*

Tube-Turns are *not* bends or castings. Being welded into the line, their joints are as smooth and as strong as the metal away from the joints. . . They can be nested closer and save space. . . They have no internal or external projections to set up pressure drop or to complicate insulation. . . They are non-porous, do not develop pin holes, and have strength as great or greater than that of the pipe in the line. . . *They also have the same factors of expansion and contraction as the pipe in the line.* . . They are much lighter than any other stock fitting. An 8″ flanged fitting, with the necessary accessories, for example, weighs 329 lbs. An 8″ Tube-Turn weighs 68 lbs. This simplifies installation and cuts down hanger and anchor expenses.

And Tube-Turns materially reduce maintenance costs. They NEVER leak. They never have to be tightened up. Where lines are insulated, this feature brings about the added economy of longer life for the insulation.



Ten 3-inch, 90° TUBE-TURNS in manifold for fresh-feed pumps in a large Eastern refinery. Pressure, 125 lbs. Note welded branches of same size as mains.

Left: 180° cut-away TUBE-TURN, showing uniform walls. Tube-Turns are also made in 45° and 90° types, in sizes 1″ through 18″ I. P. S. and 1½″ through 12″ Extra-Heavy I. P. S.

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Tube-Turn users include almost every important firm in the petroleum industry. It will pay *you* to get all the facts. *Write for Bulletin 104 TODAY.* No obligation, of course.

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TUBE-TURNS

The Stock Fittings for Pipe Welding

Prove Another Geophysical Prospect

Test in Plaquemines Parish, Extreme Southeastern Tip of Louisiana. Additional Extension to Hankamer Dome. Refugio Active

By Nell Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Feb. 9.—With interest of Gulf Coast operators shifted to the new Rusk and Gregg County district of East Central Texas, where they, along with those of other parts of Texas, Louisiana and Arkansas, have holdings, coastal developments were greatly overshadowed and received little attention during the past week.

Numerous idle rigs were and are being moved out of the coastal fields, destined for work in the new East Texas play. This exodus into that area is not expected to cause any further curtailment of work along the coast. On the other hand, in some parts there has been an upward trend within the past several weeks.

However, so far as new developments were concerned, the past week on the coast was one of the slackest witnessed in many weeks, and, outside of further expansion of the deep sand area at Refugio in the lower coastal country and an additional extension of the Hankamer Field, there was little of importance. From a geophysical standpoint, the finding of what is believed to be cap rock in Gulf Refining Co.'s No. 2 Buras Levee Board, in the Rose area, indicated another prospect has been definitely proved as a dome.

Refugio Busy

Refugio, although not in the salt dome district, figured most conspicuously in coastal completions. Five new wells were added in that area. United Production Corp.'s No. 5 Mitchell, southeast of the townsite and on the extreme northern edge of the deep sand area, furnished the best well, flowing 750 bbls. daily from sand at 6,431-46 feet, with 18 feet of screen in the hole. Production is on two quarter-inch chokes with working pressure of 1,820 pounds.

Approximately a mile to the north, United Production Corp. completed its No. 5 O'Brien, a former 5,400-foot well deepened to the 6,400-foot horizon at 6,451-59 feet. This well, with 18 feet of screen, came in flowing 525 bbls. of pipe line oil daily through two quarter-inch chokes with working pressure of 1,500 pounds. Some 2,500 feet westward and on the east edge of the townsite, Ed Jones' No. 1 Kelley, Block 106, made a third 6,400-foot well by its completion at 6,451-57 feet, flowing 300 bbls. of pipe line oil through a quarter and a three-sixteenths-inch choke with 2,100 pounds working pressure. The latter company at the close of the week was preparing to test five additional 6,400-foot wells, all located just east of the townsite, and at this time Refugio is at one of its most interesting stages.

Two other completions were reported at Refugio, these being Saxet Oil Co.'s No. 6-A Wilson Heard, in the heart of the old gas producing area, and Moody-Seagraves-Phillips' No. 3-B J. F. B. Heard, on the south end of the 3,700-foot field. Both wells were completed in the 3,700-foot sand, the former flowing 670 bbls. of pipe line oil on a five-eighths-inch choke with 13 feet of screen at 3,684 feet, and the latter flowing 160 bbls. of fluid, 60 per cent water, with 19 feet of screen at 3,661 feet.

Houston Oil Co. so far has failed to complete its No. 1 Rooke, in the extreme southwest corner of the Refugio area. This well, which is a rank wildcat so far as deep production is concerned, showed some oil on swabbing and fluid rose 40 feet in the hole after a 30-hour shutdown of work, but the well would not flow. It is in a sand at 6,205 feet with 22 feet of screen. Location of this is on the extreme southwest end of the Refugio area and some 3 miles from the nearest deep production. This company also has abandoned temporarily its efforts to make a well in No. 16 O'Connor, a deep wildcat, approximately 2½ miles east of the main Refugio deep production. This well is at a total depth of 5,913 feet and showed some oil.

Developments in the recently opened mile west extension of the 3,700-foot field at Refugio showed further disappointments during the week. L. L. Smith's No. 2 Rogers, 400 feet due north of his No. 1, the discovery well and so far the only producer, has been abandoned temporarily after drilling to 5,091 feet where it was in salt water sand. This well flowed for a short time in sand at 3,641 feet, the horizon in which No. 1 was completed, but went to water and drilled deeper. Traylor, Rutherford & Morgan's No. 1 Rogers heirs, northeast of the Smith wells, also has been abandoned temporarily in shale at 3,726 feet after failing to find production. Houston Oil Co.'s No. 14 Pratt-Hewitt-Rooke, direct southward offset to the discovery well, cored salt water sand to 3,911 feet and has been shut down waiting orders.

Hankamer Extended

At Hankamer, southern Liberty County, Gulf Production Co. extended production another 500 feet to the east and north in its No. 11 Boyt, which is flowing 600 bbls. daily on a half-inch choke from sand at 3,896 feet. This is the eleventh consecutive well without a failure which Gulf has brought in in the main part of the Hankamer area. Several failures have resulted in wildcats but these have been some distance away from where the present pool is being developed. The latest failure is Gulf's No. 1 Ezzell, which was quit temporarily the past week after testing salt water at 7,095 feet. This test is about half a mile west of the field.

Other producing completions the past week included Gulf Refining Co.'s No. 26 Lutcher-Moore, Starks, Calcasieu Parish, which is flowing 600 bbls. daily from the shallow cap rock at 1,205 feet; John Feering's No. 1 Graff, northwest side of Humble, flowing 450 bbls. with 138 feet of screen at 4,427 feet; and Yount Lee Oil Co.'s No. 122 McFaddin, Spindletop, flowing 20 bbls. net oil at 4,623 feet. In the latter field, Yount Lee Oil Co. abandoned its No. 53 McFaddin, a workover, which tested salt water at 2,943 feet. Sun Oil Co. quit two deep tests at Clay Creek, Washington County, these being No. 4 Janner, abandoned in salt at 5,100 feet, and No. 1 Freeman, in salt at 3,638 feet. The former went more than 1,200 feet into salt in an attempt to drill through the salt. Arkansas Natural Gas Co. abandoned its No. 1 Machemehl, a wildcat 2½ miles north of Bellville. This quit in a salt water sand at 5,005 feet. The Texas Company quit No. 5 State-Bay St. Elaine, Bay St. Elaine Dome, Terrebonne Parish, Louisiana, in salt at 1,663 feet. Gulf Refining Co.'s No. 2 Gardiner, north end of the Vinton district, was abandoned in salt at 3,974 feet.

New Dome

Gulf Refining Co.'s No. 2 Buras Levee Board, Section 27-21s-3e, Plaquemines Parish, Louisiana, apparently has proved another geophysical dome. It is in a cavity in what is believed to be cap rock at 2,216-17 feet. It has set a string of 7-inch casing to drill deeper. This dome, in the extreme southeastern tip of Louisiana, was located by seismograph during 1928. The test is the second drilled on the prospect, both of which have experienced gas blowouts. The first was abandoned at 234 feet after the hole had cratered. No. 2, located 200 feet from No. 1, blew out at 835 feet but this gas was killed successfully, and the hole deepened. Geophysical findings during 1928 had indicated dome material, cap rock or salt, would be found between 2,000 and 2,500 feet.

Daily Average Production

Daily average production of the pools in the Gulf Coast area for the week ending February 7 follows:

SOUTHEAST TEXAS	
Allen	121
Barbers Hill	22,841
Batson	1,062
Big Creek	2,718
Blue Ridge	1,405
Brenham	144
Boling	930
Clay Creek	2,538
Damon Mound	596
DeWalt	12,312
Esperson	2,985
Fannett	1,129
Goose Creek	4,245
Hankamer	2,231
High Island	632
Hull	6,483
Humble	9,998
Lost Lake	352
Markham	196
Moss Bluff	813
Mykawa	227
Nash	234
North Dayton	724
Orange	3,126
Orchard	2,220
Pierce Junction	8,571
Port Neches	1,549
Raccoon Bend	8,002
Refugio	30,710
Rockland	4
Saratoga	1,060
Sour Lake	2,021
South Liberty	2,724
Spindletop	12,864
West Columbia	4,316
Total Southeast Texas	151,083
Week ended January 31	152,694
Decrease	1,611
SOUTH LOUISIANA	
Ansa La Butte	50
Bayou Blue	135
Bayou Bouillon	99
Black Bayou	1,002
Edgerly	512
Jennings	678
Hackberry	4,303
Iowa	280
Lake Barre	3,450
Lake Pelto	124
Lockport	4,827
Port Barre	1,743
Sorrento	50
Starks	702
Sulphur	1,973
Sweet Lake	1,136
Vinton	1,947
Welsh	77
White Castle	977
Total South Louisiana	24,065
Week ended January 31	27,074
Decrease	3,009
Total Gulf Coast	175,148
Week ended January 31	179,768
Decrease	4,620

Lost Lake Dome

Of some interest locally have been irregularities which have been found on

(Continued on Page 100)

GULF COAST FIELDS AND WILDCATS

Week Ended February 7
All Rotary

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 1-B Barber, north	Drlg. hard sand and shale 4,587 ft.
Mills Bennett Prod. Co.'s No. 5 Higgins, southeast	Drlg. shale and lime 2,742 ft.
Mills Bennett Prod. Co.'s No. 1 Gulf-Smith	Coring sand 5,497 ft.
Humphreys Corp.'s No. 2-B Barber, north	Drlg. salt 3,446 ft.
Humphreys Corp.'s No. 1 Louise Fitzgerald, north	Total depth 5,379 ft. in salt; drill stem stuck; sidetracked at 1,700 ft. and drlg. salt and lime 3,146 ft.
Humphreys Corp.'s No. 2 Wilburn, southeast	Drlg. hard sand and lime 1,236 ft.
Humphreys Corp.'s No. 10-A Kirby (workover)	Set 41 ft. 5-in. screen 6,378 ft.; swabbed salt water; to deepen.
Humphreys Corp.'s No. 1 Lula Barber, west flank, W. D. Smith Sur., 50 ft. from N line and 50 ft. from E line of tract	Rig.
Humphreys Corp.'s No. 1 E. H. Winfree, west flank, W. D. Smith Sur., 50 ft. from S line and 75 ft. from W line of tract	Rig.
McAlbert Oil Co.'s No. 4 Woodward (workover)	Drlg. hard sand 5,009 ft.
McAlbert Oil Co.'s No. 8 Woodward, east flank	Rig standing.
Rio Bravo Oil Co.'s No. 2 Fisher, west flank	Drlg. 200 ft.
Sun Oil Co.'s No. 4 McKinney fee, east flank, Wm. Hodge Sur., 100 ft. W No. 3 and 40 ft. N line tract	Drlg. sandy shale 5,491 ft.
Sun Oil Co.'s No. 3 Chambers, south	Drlg. rock 1,745 ft.
Sun Oil Co.'s No. 1 Smith, west	Drlg. rock 4,114 ft.
Sun Oil Co.'s No. 14 Wilburn fee, east	Rock 1,293 ft.; drill pipe stuck.
The Texas Company's No. 1 Williams, southwest	Fishing drill pipe 6,724 ft.
The Texas Company's No .2 Winfree, west flank, W. D. Smith Sur., 264 ft. N, 50 ft. W at right angles out of SE cor. of lease	Spudded.
The Texas Company's No. 3 Winfree, west flank, W. D. Smith Sur., 478 ft. N and 50 ft. W at right angles out of SE cor. of lease	Rig.
Yount Lee Oil Co.'s No. 10 Woodward, southeast	Drlg. hard sand and lime 2,758 ft.
Yount Lee Oil Co.'s No. 17 Chambers, south	Drlg. sand showing oil 5,043 ft.
Yount Lee Oil Co.'s No. 18 Chambers, south flank, Wm. Bloodgood Sur., 100 ft. N Sun Oil Co.'s No. 7	Drlg. gumbo 985 ft.
Yount Lee Oil Co.'s No. 19 Chambers, south flank, Wm. Bloodgood Sur., 10 ft. N Sun Oil Co.'s No. 8	Drlg. sand and gravel 151 ft.
Yount Lee Oil Co.'s No. 6 Phillips, east	Rig standing.
Yount Lee Oil Co.'s No. 1 Winfree, west	Drlg. shale and lime 2,861 ft.
Yount Lee Oil Co.'s No. 2 Winfree, west flank, W. D. Smith Sur., 50 ft. from S line and 100 ft. from E line of tract	Rig.

RACCOON BEND—AUSTIN COUNTY

H. R. Flannigan's No. 2 Dietrich	Cmtd. 10-in. csg. 1,063 ft.
Humble & Valley's No. 4 Diemar	Shale 1,123 ft.; cmtd. 10¾-in. csg. 1,117 ft.
Humble & Valley's No. 9 Mueller	Sandy shale showing oil 3,269 ft.; reaming to set csg.
Humble & Valley's No. 7 Payne	Derrick.
Humble & Valley's No. 8 Payne	Derrick.
Humble & Valley's No. 11 Payne	Cellar dug.
Humble & Valley's No. 1 Martha Remmert	Derrick.
Humble & Valley's No. 3 Sherrod	Rig.
Humble & Valley's No. 4 Sherrod	Drlg. sandy shale and shell 3,175 ft.
Humble & Valley's No. 5 Sherrod	Location.
Humble & Valley's No. 13 Thompson	Location.
Humble & Valley's No. 6 Woodley	Derrick.
Humble & Valley's No. 7 Woodley	Derrick.
Humble & Valley's No. 8 Woodley	Derrick.
Humble & Valley's No. 9 Woodley	Derrick.

HUMBLE—HARRIS COUNTY

Dunbar & Deering's No. 2 Bennett (workover)	Pulling screen to deepen 4,069 ft.
LaRue, trustee's No. 1 Crane, northwest	Derrick.

(Continued on Page 106)

Another Horton tank farm — fully equipped with WIGGINS BREATHER ROOFS

28 Breather-roofed Horton tanks stop standing storage losses in the Oklahoma City field.

THE value of the Wiggins Breather Roof on standing storage is exemplified by its installation on entire tank farms. Twenty-eight Horton tanks, each equipped with a Breather Roof for stopping evaporation losses, were recently erected in the Oklahoma City field.

This roof is fastened solidly to the top angle of the tank shell, flexing up and down to accommodate vapor volume fluctuations due to changes in temperature. Under normal conditions, no vapor is vented out, nor air drawn in.

Wiggins Roofs represent an investment that pays for itself in a few months through evaporation savings, and in addition they reduce fire hazard. They also reduce corrosion, which is particularly advantageous when sour oil is stored. They may, of course, be installed on existing tanks as well as new ones.

Horton oil storage tanks are installed in oil fields all over the world . . . their design and construction are the result of long experience in oil tank work . . . fabrication facilities comprise plants at Chicago; Greenville, Pa.; Birmingham, Ala.; and Bridgeburg, Ont. . . . our own erection crews are available anywhere.

STANDARD CAPACITY HORTON STORAGE TANKS

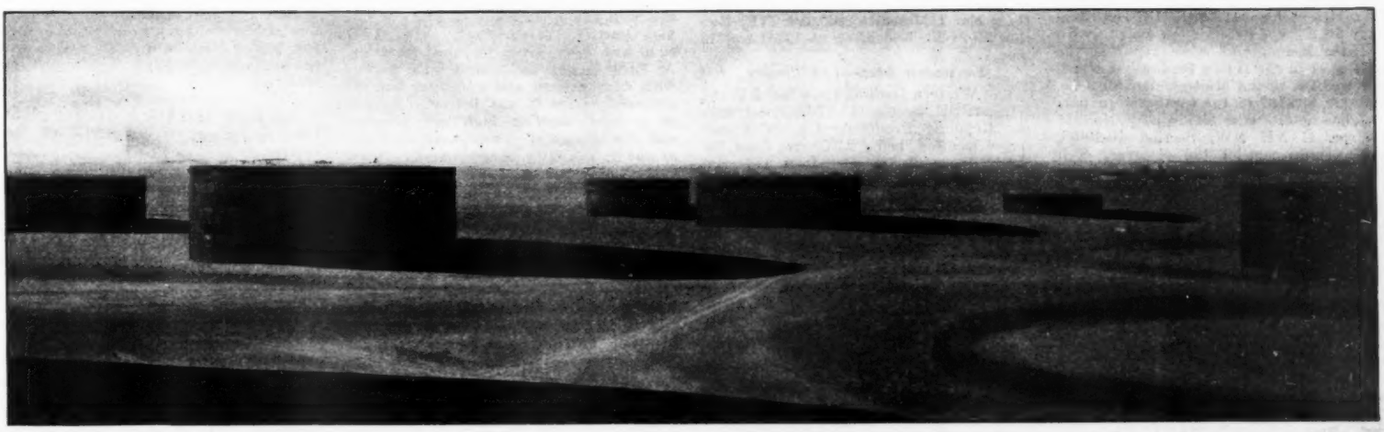
Capacity in Bbls.*	Diam.	Ht.	Capacity in Bbls.*	Diam.	Ht.
500	17'-6¼"	11'-9"	20,000	70'-2"	29'-0⅛"
1,000	20'-3"	17'-6"	25,000	78'-9"	29'-0⅛"
2,000	25'-0"	23'-3½"	31,200	87'-8¾"	29'-0⅛"
2,500	27'-9"	23'-3½"	35,000	93'-7"	29'-0⅛"
3,000	30'-6"	23'-3½"	37,500	96'-6"	29'-0⅛"
4,000	31'-6"	29'-0½"	40,000	99'-5½"	29'-1"
5,000	35'-3"	29'-0½"	45,000	105'-3½"	29'-1"
7,500	43'-0"	29'-0½"	50,000	111'-1¼"	29'-1"
10,000	49'-8½"	29'-0½"	55,000	117'-0"	29'-1"
12,500	55'-9"	29'-0¾"	80,000	117'-0"	41'-10⅛"
15,000	61'-0"	29'-0¾"	100,000	134'-8¾"	40'-7"

*Barrels of 42 U. S. Gallons.

We will be glad to quote on tanks, Wiggins Roofs and other platework; also furnish data from which you can figure evaporation savings possible with your tankage (either working or standing storage tanks). Please address our nearest office.

CHICAGO BRIDGE & IRON WORKS

DALLAS ..... 3341 Magnolia Bldg.
HOUSTON ..... 1119 Electric Bldg.
TULSA ..... 2406 Exchange Bank Bldg.
BIRMINGHAM ..... 1536 Fiftieth St., N.
CHICAGO ..... 2128 Old Colony Bldg.
DETROIT ..... 1514 Lafayette Bldg.
CLEVELAND ..... 2204 Midland Bank Bldg.
NEW YORK ..... 3147 Hudson Terminal Bldg.
PHILADELPHIA ..... 1615 Jefferson Bldg.
BOSTON ..... 1517 Consolidated Gas Bldg.
SAN FRANCISCO ..... 1054 Rialto Bldg.
HAVANA, CUBA ..... Apartado 2507



OGJ 2-12 Gray

Continue Tight Curtailment in Hobbs

Field Kept Down to 31,353 Bbls. per Day With a Potential Over 1,000,000 Bbls. Surprise Well in Eddy County

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Feb. 10.—The allowable outlet for the Hobbs Pool for the first half of February was placed at 31,353 bbls. daily. Three completions were reported, all by the Midwest Refining Co. and located in the southeastern part of the field, the best one being its No. 11 State in Section 5, which was rated at 8,230 bbls. The Shell Petroleum Corp.'s No. 1 Coleman, in the Eunice Pool, averaged 15 bbls. an hour after a shot with 300 quarts. Eddy County reported a good well in the Jackson Pool in Flynn, Welch & Yates' No. 1 Stevens which, upon being deepened a few feet averaged 518 bbls. daily, the largest completion so far made in that pool.

Colorado reported a show for 1,000,000 feet of noninflammable gas in a wildcat in Park County in what is believed to be the highest well in the world. The Platte Valley Petroleum Co.'s Greasewood Dome discovery is showing an increase and is making 440 bbls. daily. One well in Pueblo County was abandoned. A small show of oil and gas was found at 1,580 feet in the Mountain Fuel Supply Co.'s No. 2 State on the Hiawatha Dome.

In Wyoming, the Midwest's Geary Dome test is within a few feet of the objective second Wall Creek sand, and the Wyoming Associated Oil Co. had an 815-bbl. well in Salt Creek. The Producers & Refiners Corp.'s Sand Draw deep test has cored into another sand in the Dakota.

In Montana, the Hill & O'Neill's No. 1 Michaels, in the Cut Bank Field, missed the pay and was dry and abandoned. The Big Lake structure in Stillwater County is to have a 7,000-foot test to the Madison. The Western Natural Gas Co.'s second well in the Whitlash district in Liberty County is showing gas.

NEW MEXICO

Hobbs Pool—Lea County

The allowable outlet for the Hobbs Pool for the period February 1 to February 15, inclusive, was set at 31,353 bbls. daily by the executive committee in charge of proration. This is but a slight change from the maximum for the last half of January which was placed at 31,430 bbls. daily. The field potential as of February 1 was 1,116,820 bbls. daily from 124 units now in production. The maximum outlet is prorated on the basis of 61 bbls. per unit and a potential allowance of .020737 of the average unit potential. There were a total of 141 wells on production as of February 1, which compares with 137 on January 16.

Three completions were reported the past week in the Hobbs Pool, all of which are credited to the Midwest Refining Co. and are located in the southeastern part of the field. The Midwest's No. 11 Thorpe, C NE NW, Section 10-19-38, half a mile east of the discovery well which was brought in more than two years ago, was deepened 2 feet to 4,202 feet and showed some improvement. It made 621 bbls. in 24 hours through a five-eighths-inch choke on the 2½-inch tubing. The tubing was run to 4,061 feet. It is located a little less than half a mile out from the nearest producer. The same company's No. 11 State, C NE NW, Section 9-19-38, a mile to the west of the Thorpe well, was completed at 4,175 feet with the 3-inch tubing at 4,150 feet. It gauged at the rate of 648 bbls. in 24 hours through tubing only and 875 bbls. through tubing and casing, along with 2,655,000 feet of gas. The Midwest's No. 11 State, C NE SW, Section 5-19-38, at a total depth of 4,193 feet, was given a potential of 5,022 bbls. of oil and 4,080,000 feet of gas through tubing and 8,230 bbls. of oil and 7,670,000 feet of gas through tubing and casing.

The Amerada Petroleum Corp.'s No. 1-C State, NE cor., Section 36-18-37, in the northwestern part of the field, and an offset on the south to the Humble Oil & Refining Co.'s No. 2-A State, is bottomed at 4,236 feet, with the 3-inch at 4,210 feet, and is swabbing. The top of the pay was at 4,176 feet. The well flowed by heads and made 70 bbls. in two hours. It is the first well to be drilled in Section 36 and is believed to be close to the edge.

The Gypsy Oil Co.'s No. 7 Grimes, SE NE NW, Section 32-18-38, is rigging up rotary.

The Midwest Refining Co.'s No. 8 Terry, C NW NW, Section 9-19-38, is bottomed at 4,000 feet and waiting for cement to set. The 8⅝-inch was cemented at 3,988 feet.

The National Securities Oil Co.'s No. 1 Linam, NE SE SW, Section 33-18-37, is bottomed at 3,860 feet and drilling by tools.

The Western Drilling Co.'s No. 1 State, C SW NE, Section 15-18-37, joint with the Republic Production Co., which was carried last week as a location under the name of Henderson & Dexter, is building derrick.

Eunice Area—Lea County

Two of the wells drilling in the Eunice Pool which have been in the pay for the past two weeks, were listed as completions this week. The Shell Petroleum Corp.'s No. 1 Coleman, NW cor. SE, Section 17-21-36, an offset on the south to the Tidal Oil Co.'s No. 1 Coleman, which is averaging around 800 bbls. a day, was completed at a total depth of 4,005 feet. It was shot with 300 quarts at 3,790-3,815, 3,860-70, 3,890-3,905 and 3,970-95 feet, and is producing 15 bbls. per hour, or at the rate of 360 bbls. daily, through the casing. The Continental Oil Co.'s No. 2 A. E. Meyers, SE cor. NW, Section 17, an offset on the west to the Tidal well, was completed at 3,992 feet after a shot and was put on production without again being shot as was at first planned. It made 112 bbls. first 24 hours. The Atlantic Oil Producing Co.'s No. 1 Coleman, SW NE NW, Section 17-21-36, is bottomed at 3,795 feet and is rigging up cable tools. It was cored at 3,729-94 feet and tested dry. This location is one-third of a mile to the northwest of the three producers in the center of the section. The Continental Oil Co.'s No. 1-A Lockhart, NE cor., Section 18-21-36, is waiting for cement to set at 3,825 feet, and the California Co.'s No. 1 Meredith, SE cor. NE, Section 19-21-36, is drilling at 1,600 feet in lime.

Lovington Area—Lea County

The Western Drilling Co.'s No. 1 State, NE cor. SE, Section 15-17-36, joint with the Republic Producing Co., is a corrected location, being 2,310 feet from the south line and 330 feet from the east line in Section 15 instead of Section 13. Some reports carry this as Henderson & Dexter.

Caprock Area—Lea County

The Western Drilling Co.'s No. 1 Bridges, SE cor. NW, Section 17-17-34, is drilling at 4,647 feet after cleaning up a fishing job.

Eddy County

The Jackson Pool in the Maljamar area, northeast of the Artesia district in Eddy County, attracted considerable attention when Flynn, Welch & Yates' No. 2 Stevens, NW NE SW, Section 13-17-30, made 540 bbls. in 24 hours after being deepened a few feet. It is the best well so far brought in in that district and is drilling deeper in hopes of a further increase. Last August this well was temporarily completed at 3,442 feet with an initial production of 60 bbls. per day. The tools were at the bottom of the hole. Subsequently a long fishing job resulted in clearing the hole and drilling was resumed. At 3,460 feet it averaged 518 bbls. daily for three days from the deeper pay at 3,451-57 feet.

San Miguel County

The Cibola Petroleum Co.'s No. 1 Crow, SW cor. NE, Section 9-13-14e, Ribera district, is shut down for fuel at 819 feet, and the Starr Oil Co., Ltd.'s No. 3 Adams, NE cor., Section 25-17-17, Dunken Dome, is drilling at 3,361 feet. The Con-O-Kul Oil Co.'s No. 1 Cherryvale, NE Section 34-17-21, is spudding at 45 feet in a 20-inch hole.

Valencia County

Thomas B. Harlan and others' No. 1 Harlan Ranch, NW cor., Section 5-6n-2e, is drilling at 4,570 feet, and the Acme Development Co.'s No. 1 Santa Fe, SW cor. NW, Section 27-7n-4w, is bottomed at 5,065 feet and underreaming the 5⅞-inch.

Luna County

The Angelus Oil & Mining Co.'s No. 3 State, NW SE, Section 20-21-10w, is drilling at 5,941 feet in lime.

COLORADO

Park County

A wildcat in the center of Colorado which has the reputation of being the highest drilling well in the country, if not in the world, attracted attention this week when it was reported making considerable noninflammable gas at a total depth of 1,810 feet. This well is the South Park Oil Co.'s No. 1 Milligan, NE cor. SE, Section 13-8s-76, in the Jefferson district, in Park County. The elevation of this well, based on railroad surveys, is 9,600 feet. It is in what is known as the South Park, one of three great basins in the mountain range. The others are the Middle and North Parks. Middle Park has had very little prospecting for oil, but it will be recalled that it is in North Park, near Walden, where the Continental Oil Co. has its famous "ice cream" wells that make a noninflammable gas that comes from the hole at a temperature of 110° below zero mixed with frozen crude oil of very high gravity.

The South Park well commenced spudding May 18, 1930, and William T. O'Bryan, geologist for the company, estimated the Frontier at 1,240 feet and the Dakota at 1,864 feet, only he used names given to geological formations in other parts of the Rocky Mountain area. While there have been several reports of this well having shows of oil of unusually high gravity, comparatively little attention has been given to the operation. At 1,580 feet, it had considerable trouble with cavy ground and a cavity, but the drillers insisted it was bottomed on top of a sand showing high gas pressure and the strings of casing were anchored at the top. After several weeks' delay, this trouble was overcome and a water shutoff was made with the 8¼-inch string. The total depth depth at present is given as 1,810 feet, a few inches in the sand. This is making a bluish vapor which will not burn. The flow is estimated at about 1,000,000 feet a day. The hole is caving some and a formation shutoff will have to be made. C. D. Johnson and C. E. Shoenfelt, of Denver, went to the well yesterday and took samples of the gas for analysis for possible helium content. The identity of the horizon is not certain, but the supposition is that it is one of the Frontier series. The drillers claim that the show of oil at the higher level tested 68° gravity. It will be necessary to make a formation shutoff before much additional drilling can be done. The South Park Oil & Gas Co., a company not identified with the first named concern, is drilling a well 7 miles to the south of No. 1 Milligan in its No. 1 Esche, SE cor. NW, Section 5-9s-76, which is preparing to resume at 600 feet.

Weld County

The Platte Valley Petroleum Co.'s No. 1 Patterson, NE SE NW, Section 24-6n-61, Greasewood Dome, which came in on October 10, 1930, at 6,641 feet, and attracted attention of major operators to the eastern Colorado area, is showing an increase in production. It originally made 160 bbls. naturally, but when deepened to 6,646.5 feet, it made 565 bbls. in 24 hours. It gradually dropped down to an average of 350 bbls. and for the past week or two has been increasing and is now making an average of 440 bbls. It has produced altogether 30,000 bbls. up to February 1, of which 28,385 bbls. was delivered to the Continental Oil Co. President Menus Johnson says that the company will not drill the well any deeper before spring and possibly not then. There is a difference of opinion as to whether the well has yet reached the Muddy sand of the Dakota series. While five wells are scheduled to be drilled this year by the company, including an offset on the north of the discovery, no locations have yet been announced and plans for the drilling campaign are still being worked out. Operators who have been leasing extensively all through that territory have been hoping that the discovery well will be deepened before any extensive wildcatting is undertaken in that district.

Morgan County

The Indian Territory Illuminating Oil Co.'s No. 1 State, C NE NE, Section 16-1n-57, Fort Morgan anticline, is reported unofficially to be drilling at around 4,200 feet.

Arapahoe County

The MacDeb Drilling Co.'s No. 1 Fitzsimmons, C S half NE, Section 7-4s-66, near Aurora, is still shut down at 5,730 feet and is not expected to resume for another week. It was reported making some gas when drilling was suspended. The company has been renewing its leases and filling in some vacant places in its block.

Adams County

Nettie M. Slatt's No. 1 Hills, SE cor., Section 27-3s-64, Watkins district, is shut down at 2,508 feet with the 10¾-inch cemented at 2,500 feet. The last 8 feet of hole showed a little gas below the pipe. The company has 3,000 feet of 8⅝-inch special seamless pipe on the ground and will move in another 1,000 feet before resuming. The drillers assert that the formations are running more than 2,000 feet higher than in the MacDeb well to the southwest, but this is accepted with reserve.

Jefferson County

The Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor., Section 24-4s-69, near Denver, is drilling at 3,847 feet in sandy shale and carrying the 6⅝-inch.

Larimer County

C. Leonard Smith's No. 1 State, SE cor., Section 36-12n-70, Sand Creek, is drilling at 455 feet in lime. It has a small show of gas supposed to be coming from a 2-foot stratum of asphalt cut just above the present bottom. The Continental Oil Co.'s No. 3 Scott, SW SE, Section 6-9-68, Wellington Dome, is bottomed at 4,932 feet and is cleaning out and preparing to drill cement. The hole was cemented at this depth to stop caving. It is bottomed in the lower Morrison and is intended as a test of the Sundance. The Standard Oil Co. of Colo-

(Continued on Page 98)

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California Gas Law Found Ineffective

Low Gas-Oil Ratio Wells at Kettleman Hills Responsible. New Legislation on Oil Production Needed

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Feb. 9.—California's gas conservation law, recently declared constitutional by the State Supreme Court and the District Court of Appeals in two separate decisions, is about to be discarded in favor of some other remedial form of legislation. The decision to discard temporarily the gas conservation law, designed primarily to restrict crude oil production by prohibiting the waste of natural gas, is attributed to the fact that recent developments prevent it from affording any immediate relief and minimize the possibility that it may ultimately be an important factor in effecting stabilization.

A short time ago the gas conservation law was considered the acme of perfection as it held out every expectation of fulfilling its primary mission and at the same time conserve natural gas. Its status today, however, is one of uncertainty due not to any deficiency in the measure itself, but rather because of the fact that present conditions prevent its successful enforcement. The California gas conservation law was relegated to the junk heap by two wells and its demise is expected to be made certain by several more completions in the not far distant future. The two wells which preclude successful enforcement of the gas law are the Petroleum Securities' No. 2 Felix, and the Superior Oil Co.'s No. 1 Huffman, both located in the north dome at Kettleman Hills. These wells are producing 5,350 bbls. and 11,200 bbls. of crude oil and 5,400,000 feet and 23,000,000 feet of natural gas per day respectively. It has only been within the past few weeks that the real significance of these wells and their effect on the gas law became apparent.

Excessive Ratio

The excessive gas-oil ratio characteristic of the Milham high pressure zone at Kettleman Hills rendered this field especially amenable to the gas law and the State Department of Natural Resources, in an effort to eliminate the enormous waste of natural gas, late last year petitioned the Superior Court at Hanford to enjoin operators from further waste. This action, together with the unit plan of operation, promised to restrict the oil production of Kettleman Hills to an absolute minimum and eliminate gas waste.

The Petroleum Securities' No. 2 Felix, brought in during the latter part of January, 1931, completely upset the apple cart, however, as it is now impossible for the State to enforce the gas law on a gas-oil ratio basis. It will be noted from the production figures above that No. 2 Felix is only producing 1,009 feet of natural gas for each barrel of crude oil brought to the surface. The Superior Oil Co.'s No. 1 Huffman is also producing below the limitation established by the State Mining Bureau as a normal reasonable gas-oil ratio. Wells finished previous to these two projects all registered exceptionally high gas-oil ratios, one for a time averaging 50,000 feet of natural gas per barrel of crude oil. Of the eight wells on production in the north dome, No. 2 Felix and No. 1 Huffman are producing 16,550 bbls. of crude oil and 28,400,000 feet of natural gas out of a total daily field production of 26,880 bbls. of crude and 396,625,000 feet of natural gas.

Executives in close touch with the situation in California are of the opinion that some new method must be employed to stabilize production as the gas law has failed to become a factor of any consequence up to the present time and cannot be applied to deep zone wells at Kettleman Hills because the gas-oil ratio of this horizon is considerably below that of most other fields. Just what will be done remains to be seen, although it appears certain the industry must adopt some regular yardstick for general application. The failure of the gas conservation law to become a factor of consequence makes it almost obligatory to bring Kettleman Hills into the general statewide curtailment agreement because this field will become a very serious factor within six months as several potential producers being drilled on fee acreage are scheduled for completion in the deep zone during this period. The Kettleman unit plan may afford some relief but this plan will not have any bearing on fee acreage outside the area covered by the agreement unless these holdings are subsequently brought under its jurisdiction. It goes without saying it will not take many more of these 10,000-bbl. wells to affect general conditions adversely, especially because of the high gravity oil produced and the relatively large volume of natural gasoline recovered.

The unsuccessful attempt to enforce the gas conservation law during 1930 and its subsequent obsolescence puts the California oil industry right back where it was at the beginning of last year. Many executives approved the gas law at that time as an indirect method of regulating crude oil production on the assumption that the State could not legally regulate oil production. This group has changed its views somewhat as a result of the recent decision of the California Supreme Court which upheld the State's contention in toto. It now appears evident that the California legislature will be asked to afford additional relief when it convenes again within the next few weeks. A bill was recently introduced by State Senator Sharkey and, while it will probably be amended before final passage, it contemplates regulating the manner of oil production as the fundamental basis of operation. In addition to sanctioning curtailment and permitting operators to restrict production without jeopardizing contractual obligations, the bill proposes to make it obligatory for operators to produce in accordance with well established principles of engineering practice. It also proposes a division in the State Department of Natural Resources in order that oil and gas matters may be handled separately from other mineral resources. Another bill, patterned after the Oklahoma plan, is in course of preparation and will probably be introduced in the California state senate at an early date.

Crude oil production in California has been hovering around 530,000 bbls. per day for several weeks and no great change is expected to take place in the immediate future. Playa Del Rey is still producing about 12,000 bbls. per day in excess of its allotted production but action has been taken to effect a further reduction within 10 days. The situation at Long Beach is still unsettled due to cancellation of purchase contracts by the Richfield Oil Co. and the reluctance of operators to accept the mutual refining and marketing plan of this company because of the inability to determine the approximate net return. The inability to negotiate sales contracts with other majors, however, has made it practically obligatory for these producers to become parties to the agreement, although some are still holding out.

The production situation in California is fairly well in hand and there seems to be a disposition to let nature follow its course, as recent developments indicate a normal decline in the production of Los Angeles Basin fields during the the next several months. With Elwood and Ventura Avenue scheduled to be held in close restraint, the Kettleman Hills and Lost Hills-Belridge Fields are the only real threats jeopardizing present curtailment. Recent developments at Lost Hills have been unfavorable but it will be several months before this field can cause any anxiety in any event. Drilling operations at North Belridge indicate this field will be very small in areal extent so it should not cause any great distress. Kettleman Hills, however, will continue to be a real threat until it is either brought into the curtailment plan and assigned a definite allowable or some regulatory legislation enacted whereby it will be held in restraint. Marketing conditions, reflecting the unsettled condition of the crude oil situation, are very unstable and will probably continue to remain so. No general attempt has been made by major companies to meet cut rate prices of jobbers and independent refiners with the result that a wide range prevails in gasoline prices, especially in southern California territory. The majors are committed to a stabilization program and are making a concerted attempt to keep production down to a minimum. They feel, if constructive regulatory legislation action becomes effective within the next six months, the local situation will be well in hand and a good start made toward effecting permanent stabilization. The degree of relief and effectiveness achieved depends upon the type of legislation enacted, as it will undoubtedly be subjected to extensive litigation. This is particularly important in view of several deep zones known to exist in the Coyote, Dominguez, Inglewood and Mountain View Fields, together with the probability that additional new fields will be discovered from time to time. If any permament degree of stabilization is to be accomplished, the effect of drilling in these fields must be given serious consideration.

Playa Del Rey Field

Although completions in the Playa Del Rey Field of Los Angeles Basin were unusually small from a numerical standpoint, the aggregate initial daily production was fairly satisfactory. The largest well finished during the past week was Bergman and Albright's No. 4 Del Rey, which came in under a natural flow doing 2,150 bbls. of clean 23.4 gravity oil per day from the deep Recreation zone at 6,240 feet. This new well was drilled from spud to completion in a little over 100 days, including the time during which the well was standing cemented. Thomas Kelly & Sons added a new well to their list of producers by completing No. 1 Pacific Electric flowing 620 bbls. of 23.2 gravity oil per day from 5,840 feet. This new well was finished with a 6⅝-inch water string cemented at 5,500 feet and a 4¾-inch liner carrying 328 feet of perforated. The H. L. J. Oil Co. finished its first successful completion in the Playa Del Rey Field this week when No. 2 Venice was brought in flowing 584 bbls. of 22.9 gravity oil per day from the Del Rey zone at 4,378 feet, the 8⅝-inch water string having been landed and cemented at 3,450 feet. The Goodfield Petroleum Co.'s No. 1 Venice, finished in the deep Recreation zone at 5,790 feet, was only good for 250 bbls. of 23.7 gravity oil per day upon completion but the production was exceptionally clean. There are quite a large number of suspended drillers in the Playa Del Rey Field at the present time and this list is being augmented from time to time because of financial difficulties encountered and the inability to develop commercial production in the western end of the field. It is interesting to note that the best production developed at Playa Del Rey has been in the eastern end of the field, whereas the Ohio's discovery well was located in the western end of the structure. The Union Oil Co. has started rig construction for its first well on the King Vidor lease, located approximately 2,000 feet east of present production. The outcome of work on this well will be watched with interest because the trend

DAILY PRODUCTION OF OIL AND NATURAL GAS IN KETTLEMAN HILLS FIELD AT CLOSE OF JANUARY, 1931

Well No.—	Location (S.-T.-R.)	Depth (feet)	Gravity	Daily production: Barrels	Daily production: Gas (M.C.F.)	Daily production: Gas-oil ratio
Associated, No. 1 Whepley	35-21-17	7,904	42.0	1,775	34,675	29,570
Continental, No. 1 Elliott	12-22-17	6,876	63.0	1,950	80,575	41,315
Milham, No. 1 Elliott	2-22-17	7,236	61.8	1,476	58,500	39,708
Pet. Sec., No. 1 Felix	35-21-17	7,276	Killed January 29, 1931, to deepen			
Pet. Sec., No. 2 Felix	35-21-17	8,100	42.3	5,350	5,400	1,009
Standard, No. 38	35-21-17	7,392	62.2	860	30,000	34,884
Standard No. 8	1-22-17	7,108	62.0	2,275	82,500	36,264
Standard, No. 81	11-22-17	7,035	62.1	1,995	81,975	41,090
Superior, No. 1 Huffman	29-21-17	8,323	37.1	11,200	23,000	2,054
Field total				26,880	396,625	14,755

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	....	....	.....	....	.....	71,950
Diesel and gas oil	124,694	17,813	....	....	333,154	359,861
Gasoline	33,580	4,797	330,585	47,226	1,177,199	2,155,718
Coastwise—						
Crude oil	78,571	11,224	284,099	40,586	1,250,837	1,298,592
Fuel oil	480,159	68,594	347,630	49,661	1,594,502	1,678,447
Diesel and gas oil	46,852	6,693	69,375	9,911	197,545	153,026
Gasoline	177,042	25,292	268,398	38,343	940,715	1,001,299
Kerosene	17,750	2,536	.....	.....	44,479	7,124
Exports—						
Crude oil	139,872	19,982	216,324	30,903	707,585	668,005
Fuel oil	216,064	30,866	408,449	58,350	1,091,895	1,617,645
Diesel and gas oil	108,453	15,493	71,592	10,227	306,024	430,167
Gasoline	150,145	21,449	181,405	25,915	1,214,349	1,639,010
Kerosene	.....	.....	.....	.....	3,022	221,118

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF PORTS

Gasoline	.....	.....	.....	.....	.....	68,125
Coastwise—						
Fuel oil	88,259	12,608	.....	.....	312,888	325,877
Diesel and gas oil	.....	.....	.....	.....	.....	25,876
Gasoline	104,235	14,891	.....	.....	233,174	397,888
Kerosene	9,116	1,302	.....	.....	16,877	47,523
Exports—						
Crude oil	.....	.....	.....	.....	.....	3,075
Fuel oil	55,960	7,994	.....	.....	55,960	54,093
Diesel and gas oil	.....	.....	.....	.....	.....	6,050
Gasoline	14,580	2,083	.....	.....	96,750	278,926
Kerosene	.....	.....	94,961	13,566	94,961	133,749

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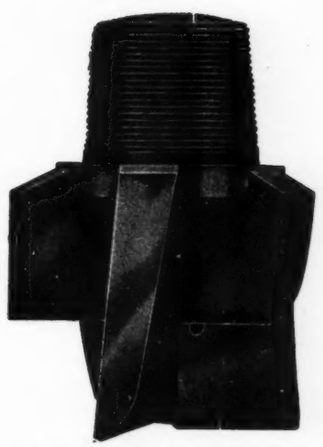

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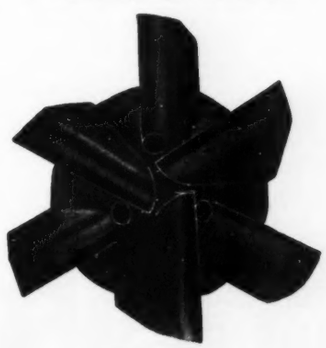

End View

of production is unmistakably in this direction.

Long Beach

There was only one good well finished in the Long Beach Field of Los Angeles Basin during the past seven-day period. This was Tom Cannon's No. 5 Murphy McGregor, which was brought in flowing 1,460 bbls. of clean 28.2 gravity oil per day from 5,150 feet. Completion of this well as a producer of clean oil proved quite a surprise as the Shell, Petroleum Securities and several other operators all failed to overcome the water trouble prevalent in this locality. Cannon's second well in this section of the field is expected to be on production some time during the coming week as drilling operations have already been concluded in No. 5 Hall Weber at 5,150 feet, the same depth at which No. 5 Murphy McGregor was completed. The Dabney-Johnston Oil Corp. has two new wells scheduled for completion in the near future and both of them, Nos. 53 and 79, should be tanking oil shortly as they are at present rotating ahead in the oil sand. The Richfield Oil Co. recompleted No. 1 Augustine after redrilling and deepening it to 4,745 feet, but further work will probably be required as present production, 100 bbls. per day on the beam, is cutting 25 per cent water. The Shell Oil Co. has just finished No. 5 Wells at 4,203 feet and this project, completed with a 6⅝-inch liner carrying 398 feet of perforated, is pumping 210 bbls. of 26.2 gravity oil per day.

Ventura Avenue

The Associated Oil Co. recovered the fish which had been holding up progress in No. 17 V. L. & W. in the Ventura Avenue Field and successfully completed this new well flowing 1,450 bbls. of 24.5 gravity oil and 4,200,000 feet of natural gas per day from 7,347 feet. The Associated has several other potential producers scheduled for completion in the Ventura Avenue Field during the course of the next 60 days but these new wells will not cause field production to exceed its allotment as operators in this area are watching their respective allotments very closely. The Shell should also finish additional completions in this field from time to time during the course of the next several months. Drilling operations have been consistently reduced in the Ventura Avenue Field during the past three months and, while additional wells will be started from time to time, the Associated and Shell have indicated their intention to reduce drilling operations to a minimum. There is a very noticeable tendency on the part of all major companies to eliminate all unnecessary development in order to facilitate curtailment work and at the same time reduce operating expenditures. The Union Oil Co. inaugurated this policy several months ago and has reduced drilling operations to such an extent that it is only drilling about 10 wells at the present time. The Barnsdall and Rio Grande, Pacific Western and other operators in the Elwood Field of Santa Barbara County have suspended all drilling operations in that field for an indefinite period of time. As a result of this limitation on development work, drilling operations have shown a substantial reduction in practically every field of the State. Development work may show a slight increase again in the near future due to lease requirements which obligate lessees to maintain normal development but this work will be held off as long as possible. There is only one incompleted drilling project under way in the Elwood Field of Santa Barbara County at the present time. This is No. 1 Bishop Evans, an outpost of the Barnsdall and Rio Grande which is being drilled in the extreme eastern part of the field to determine the outer limits of production. The last well finished in this field was the Barnsdall and Rio Grande's well No. 7 on tideland permit No. 88, completed during the latter part of January. This project established a potential of 11,200 bbls. of exceptionally clean 38.1 gravity oil before being pinched back in conformity with the curtailment agreement.

Kettleman Hills

No. 2 Felix of the Petroleum Securities, the last well to be completed in the Kettleman Hills Field of Kings County, reached a maximum daily production of 5,680 bbls. per day during the latter part of the current week and appears to be holding up exceptionally well. The company has killed No. 1 Felix and this project, together with No. 3, will be carried down into the deep zone. There are no drilling projects listed for immediate completion at Kettleman Hills, although two or three potential producers should be on production within the next 60 or 90 days. The Petroleum Securities is making good footage in No. 1 Burbank, a new well being drilled in the Middle Dome of Kettleman Hills in Section 30-23-19. This well has already passed the 3,000-foot level. The Standard's offset in Section 29-23-19 has not yet been spudded in but should get under way within the next 15 days.

Midway-Sunset

Drilling operations in the Midway-Sunset Field of Kern County are practically negligible at the present time and no increase is anticipated in the scope of work due to the decision of operators to limit development. In the Kern River Field, the California Star Oil Co. successfully

(Continued on Page 98)

MICHIGAN WILDCAT MAKES 400 BBLS.; ANOTHER WELL HAD IMPORTANT SHOW

By Paul A. Elliott

MUSKEGON, Mich., Feb. 9.—One wildcat in the vicinity of the proven Mount Pleasant Field of central Michigan was completed last week as a 400-bbl. producer and another had a show of oil which indicated important production in the Dundee formation. A third wildcat, located in Sheridan Township, Mecosta County, due west of the field, was dry in the Marshall formation and is to be abandoned.

Largest of the new wells was the Wittmer Oil & Gas Properties' No. 1 McKenzie, NE NE Section 25-15n-4w, Isabella Township, Isabella County, which made 400 bbls. initial. Dundee was topped at 3,604 feet and first pay at 3,642 feet. A second and much larger pay was encountered at 3,656-58 feet at which depth drilling was suspended.

What is considered an important show of oil was struck in the Mellon-Pollock Oil Co.'s No. 1 Charles Durnier well, NW SW NE Section 22-16n-4w, Vernon Township, Isabella County. This well had 2,000 feet of oil in the hole struck at 3,758 feet in the very top of the Dundee. The well is near George Talbot's No. 1 Carmichael, SW NE Section 22-16n-4w, Vernon Township, which came in at 3,760 feet for 200 bbls. initial September 21, 1930.

A second dry hole was completed in the Benedum-Trees Oil Co.'s No. 1 Brand, NW NW SE Section 24-15n-7w, Sheridan Township, Mecosta County. It was dry and plugging at 1,518 feet, in the Marshall formation, which failed to make gas as hoped. The same company's No. 1 Grove, NW NW SE Section 14-15n-7w, also Sheridan Township, was dry through the Dundee to 3,904 feet.

Goll & Mole Co.'s No. 2 Muma, SW SW NW Section 2-14n-3w, Chippewa Township, Isabella County, came in as a 115-bbl. initial producer in the Dundee as the only completion in the proven field. Limestone was topped at 3,518 feet and pay sands at 3,552 feet. The total depth is 3,584 feet.

About 14 wells are drilling in the Mount Pleasant area, the most active section of the State.

(Continued on Page 98)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Olympic Realty Corp., No. 1 Barnes, Los Angeles Co.	14- 2-15	4,875	cleaning out
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	rig	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	5,370	sd. sh. drilling
Mesmer City Corp., No. 1 Mesmer, Los Angeles Co.	24- 2-15	mtl.	building rig
Dwyer & Becker, No. 1 Compton, Los Angeles Co.	17- 3-13	4,520	cleaning out
Allison Synd., No. 1 Baldwin, Los Angeles Co.	8- 2-14	4,961	sd. sh. drilling
Cal. Ventura Oil Co., No. 1 Manhattan, Los Angeles Co.	30- 3-14	6,525	suspended
Cal. Ventura Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	3,396	suspended
Cal. Ventura Oil Co., No. 2 Hermosa, Los Angeles Co.	31- 3-14	3,300	suspended
Cal. Oilfields Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	1,148	sd. sh. drilling
Corniel Oil Corp., No. 1 Hermosa, Los Angeles Co.	31- 3-14	rig	rigging up
Westwood Pet., No. 1 Hermosa, Los Angeles Co.	6- 4-14	rig	suspended
Tulsa Oil Co., No. 1 Hermosa, Los Angeles Co.	6- 4-14	rig	suspended
Wood, C. L., No. 1 Hawthorne, Los Angeles Co.	10- 3-14	2,184	suspended
Alondra Co., Ltd., No. 1 Hawthorne, Los Angeles Co.	23- 3-14	rig	suspended
McMahon & McDonald, No. 1 Watts, Los Angeles Co.	12- 2-14	4,665	suspended
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	730	sd. drilling
McKeon Drlg. Co., No. 1 Watts, Los Angeles Co.	1- 3-14	5,388	sd. sh. drilling
Shelley, C. M., No. 1 Torrance, Los Angeles Co.	12- 4-14	rig	suspended
Mack Oil Co., No. 1 Chatsworth, Los Angeles Co.	6- 2-16	rig	suspended
San-Van Oil Co., No. 1 Van Nuys, Los Angeles Co.	14- 1-16	2,000	hd. sd. drilling
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	1,873	sd. sh. drilling
Bardeen Pet., No. 2 Puente, Los Angeles Co.	2- 2-10	2,998	suspended
Arden Oil Co., No. 1 Puente, Los Angeles Co.	15- 2-10	3,325	suspended
D. & B. Oil Co., No. 1 Puente, Los Angeles Co.	3- 2-10	4,620	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	1,092	suspended
Marcel Pet. Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	2,100	suspended
Cudahy Oil Co., No. 1 Bell, Los Angeles Co.	30- 2-12	1,030	hd. sd. drilling
The Texas Company, No. 1 Montebello, Los Angeles Co.	4- 2-12	1,980	sd. drilling
Celito Oil Co., No. 1 Monterey Park, Los Angeles Co.	28- 1-12	5,278	suspended
Wolfe, George, No. 1 Alhambra, Los Angeles Co.	24- 1-13	2,414	sd. sh. drilling
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	2,280	suspended
Rancho Oil Co., No. 1 Rosemead, Los Angeles Co.	30- 1-11	3,177	sd. sh. drilling
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	5,695	recemented
Nesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,910	suspended
Hall, H. L., No. 1 Newport, Orange Co.	20- 6-10	790	suspended
Gesell, T. F., No. 1 Newport, Orange Co.	29- 6-10	885	cleaning out
Standard, No. 1 Newport, Orange Co.	26- 6-10	3,750	hd. sd. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-13- 4	2,519	suspended
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	30-16- 3	4,175	suspended
Carr, O. K., No. 1 Capistrano, San Diego Co.	13- 8- 8	5,250	redrilling
Grey, H. H., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	suspended
San-Col Oil Co., No. 1 Colton, San Bernardino Co.	18- 1- 4	240	suspended
Western Gulf, No. 1 Santa Ana, Orange Co.	12- 3- 8	1,893	br. sh. drilling
The Texas Company, No. 1 Olive, Orange Co.	7- 4- 9	2,477	sd. sh. drilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Fields Gas Co., No. 1 Santa Maria, Santa Barbara Co.	8- 9-33	5,570	suspended
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	5,375	br. sh. drilling
Barnsdall, No. 1 Gato Ridge, Santa Barbara Co.	9- 8-32	6,050	fishing
Midwest Oil Co., No. 1 Los Alamos, Santa Barbara Co.	2- 7-33	1,800	suspended
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	gas—shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	gas—shut in
General Pet., No. 3 Goleta, Santa Barbara Co.	21- 4-28	4,290	sd. sh. drilling
General Pet., No. 134 Goleta, Santa Barbara Co.	21- 4-28	1,485	suspended
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	1,016	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	1,555	br. sh. drilling
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	4,931	suspended
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	1,035	suspended
General Pet., No. 143 Goleta, Santa Barbara Co.	21- 4-28	1,040	suspended
Boles Oil Co., No. 140 Goleta, Santa Barbara Co.	22- 4-28	1,040	suspended
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	1,035	suspended
U. S. Pet., No. 142 Goleta, Santa Barbara Co.	20- 4-28	1,032	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	1,019	suspended
El Camino, No. 149 Goleta Tideland, Santa Barbara Co.	22- 4-28	1,035	suspended
Bolsa Chica, No. 191 Goleta, Santa Barbara Co.	24- 4-28	4,191	plug bottom
Caldwell Brown, No. 159 Goleta, Santa Barbara Co.	24- 4-29	1,040	suspended
Cochran, J. H., No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	abandoning
Johnson, George, No. 1 Goleta, Santa Barbara Co.	X- 4-28	4,089	suspended
Prairie Oil Co., No. 1 Capitan, Santa Barbara Co.	32- 5-30	2,300	sd. sh. drilling
Cuyama Oil Corp., No. 1 Cuyama, Santa Barbara Co.	12-10-27	rig	suspended
Hart Pet. Co., No. 1 Cuyama, Santa Barbara Co.	27-10-26	....	material
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	5,500	suspended
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Prairie Oil & Gas Co., No. 1 Ventura, Ventura Co.	30- 3-22	8,495	br. sh. drilling
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
C. C. M. O. Co., No. 2-A Rincon, Ventura Co.	23- 3-24	8,090	br. sh. drilling
Continental, No. 1 Rincon, Ventura Co.	23- 3-24	mtl.	building rig
Associated, No. 1 Fillmore, Ventura Co.	16- 4-20	....	location
Pure Oil Co., No. 1 S. P. Canyon, Ventura Co.	15- 4-21	2,591	testing
Superior Oil Co., No. 1 Sespe, Ventura Co.	14- 4-21	5,375	cleaning out
Lockwood Valley Oil Co., well No. 1, Ventura Co.	32- 8-21	1,015	suspended
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	6,590	cleaning out
Kent & McDonald, No. 1 Temblor Hills, Kern Co.	3-32-22	1,511	suspended
Federal Drlg. Co., No. 1 Buena Vista, Kern Co.	20-31-24	5,230	cleaning out
General Pet., No. 1 Belridge, Kern Co.	30-28-21	3,460	redrilling
The Texas Company, No. 1 Belridge, Kern Co.	22-27-20	4,340	sd. sh. drilling
Richfield, No. 1 Belridge, Kern Co.	20-27-20	6,639	plug to 6,404
Standard, No. 2 Belridge, Kern Co.	31-27-20	4,280	reaming
Ohio Oil Co., No. 1 Belridge, Kern Co.	36-27-20	5,350	br. sh. drilling
Reward Oil Co., No. 1 Belridge, Kern Co.	34-27-20	3,370	sd. sh. drilling
Union, No. 17 Belridge, Kern Co.	36-27-20	4,895	br. sh. drilling
Union, No. 1 Bacon-Belridge, Kern Co.	21-28-20	1,950	sd. sh. drilling
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	rig	rigging up
Tom Cannon, No. 1 Belridge, Kern Co.	18-28-22	rig	rigging up
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,155	sd. sh. drilling
Rio Cal. Pet., No. 1 Shale, Kern Co.	2-27-18	2,355	suspended
Wicker, Sy, No. 1 Arvin, Kern Co.	12-30-28	rig	rigging up
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	7,100	hd. sd. drilling
Shell, No. 2 Weed Patch, Kern Co.	29-30-29	5,450	sd. sh. drilling
Shell, No. 3 Weed Patch, Kern Co.	32-30-29	1,899	sd. sh. drilling
Mohawk Oil Co., No. 1 Weed Patch, Kern Co.	32-30-29	5,966	cleaning out
Standard, No. 1 Devils Den, Kern Co.	14-25-18	1,788	br. sh. drilling
Wellport Oil Co., No. 1 Devils Den, Kings Co.	9-24-17	3,940	suspended
Shell, No. 1 Semitropic, Kern Co.	17-27-23	9,453	hd. sd. drilling
Cities Service, No. 1 Wasco, Kern Co.	16-28-24	2,180	core hole
C. C. M. O. Co., No. 1 Jasmine, Kern Co.	31-28-25	1,287	sd. sh. drilling
Moran & DeCamp, No. 1 Mojave, Kern Co.	26-10-14	750	suspended
Meridan Oil Co., No. 1 Antelope, Kern Co.	11- 9-15	3,804	suspended
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	5,530	suspended
Associated, No. 1 Jacalitos, Fresno Co.	22-21-15	3,870	sd. sh. drilling
Carruthers Oil Co., No. 1 Fresno, Fresno Co.	4-17-20	rig	suspended
Miracle Oil Co., No. 1 Cuyama, San Luis Obispo Co.	17-10-25	314	suspended
Panorama Oil Co., well No. 1, San Luis Obispo Co.	7-31-21	4,019	suspended
Latin Amer. Pet., No. 1 Shandon, San Luis Obispo Co.	21-27-15	4,525	recemented
Continental, No. 1 San Miguel, San Luis Obispo Co.	26-25-11	4,074	hd. sd. drilling
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	24-28-12	916	suspended
Pismo Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	5-31-13	3,010	cleaning out
Schockley, C., No. 2 Pismo, San Luis Obispo Co.	13-32-13	2,530	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	1,060	hd. sd. drilling
Brown, F. A., No. 1 Parkfield, Monterey Co.	15-23-14	816	suspended
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	1,635	gas well—idle
Murphy Oil Co., No. 1 Dudley Ridge, Kings Co.	20-23-20	3,460	sd. sh. drilling
Kettleman Dev. Co., No. 1 Tulare Lake, Kings Co.	32-22-19	....	location
Kettleman Lakeview, No. 1 Tulare Lake, Kings Co.	11-23-19	1,304	gas well—idle
Purman, T. H., No. 1 Reef Ridge, Kings Co.	36-23-17	2,674	sd. sh. drilling
Seymour, L. W., No. 1 Avenal, Kings Co.	10-23-16	1,148	recemented
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	5,840	sd. sh. drilling
Orinda Pet., well No. 1, Contra Costa Co.	32- 1- 3	1,375	hd. sd. drilling
White, Roy, No. 1 Pixley, Tulare Co.	8-23-26	4,495	suspended
Kettleman Trust, No. 1 Porterville, Tulare Co.	21-22-27	940	suspended
Grand View Oil Co., No. 1 Porterville, Tulare Co.	8-23-28	992	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,192	hd. sd. drilling
Colusa Oil Co., No. 1 Bush, Colusa Co.	31-15- 4	825	hd. sd. drilling
Getty Oil Co., No. 1 Nigger Heaven, Yolo Co.	23-12- 3	2,050	suspended
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,100	hd. sd. drilling
Orland Oil Synd., No. 1 Orland, Tehama Co.	31-23- 3	2,350	sd. sh. drilling

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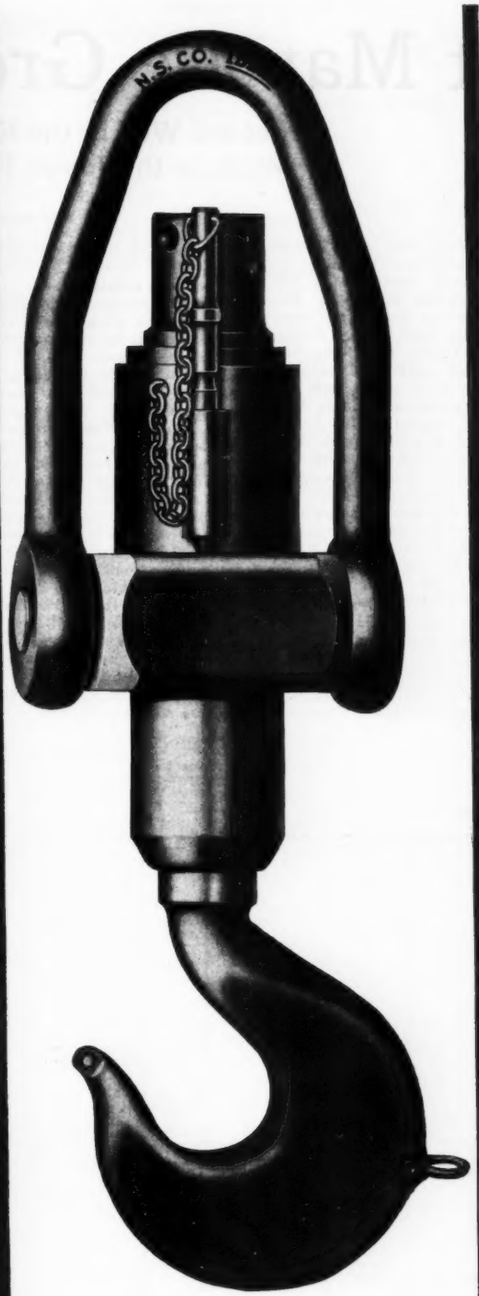

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Test May Be Gregg County Extension

Second Well in the Kilgore Area Cores Oil Sand. Two Wells in the Joiner Field Fail to Flow for Lack of Gas

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

LONGVIEW, Tex., Feb. 9.—Mamie Hammond and others' No. 1 Hamby, 4 miles northeast of the Farrell and others' discovery well, in the Martin Lant Survey, Gregg County, is drilling below 3,305 feet. Nothing much can be told at present about this test in regard to its structural position with that of the Farrell well. It is the most important test in the county and in this part of the district, for it will mean another extension, and prove up hundreds of acres of leases to production if it makes a well. If it is dry it will have much bearing on stabilizing prices in the area, and will cut down the lease "play" considerably.

Several rigs have been erected on acreage surrounding the Farrell and others' discovery, but this sector has hardly started to assume the position of the Kilgore Field opened by Ed W. Bateman, or the Joiner Field in Rusk County. These two pools were on production some weeks earlier than the Farrell discovery.

Kilgore Area

Edwin M. Jones and Houston Oil Co.'s No. 1 Crim, in the northwest corner of a 50-acre farm in the Robert E. Winn Survey, in the Kilgore area, is due to be the second well in this field. It is approximately one-half mile south of the Bateman discovery, which was purchased by the Humble Oil & Refining Co. along with the Bateman block of approximately 1,500 acres. The test cored an oil sand at 3,675-82 feet, and is shut down to set casing at 3,673 feet. The Humble Oil & Refining Co. will probably post a price for crude from the Kilgore area within a week or 10 days, as its 8-inch lateral line from its Van-Louisiana 10-inch line will be completed within a few days and ready to take oil from this field. The Houston Oil Co. has completed a 6-inch gathering line from its tank farm and loading rack on the railroad west of Kilgore to its test on the Crim farm, south of the Bateman discovery and will be ready to run the oil as soon as the well is completed. Oil from this well and lease will be shipped to the company's refinery at Camden, Ark.

Goodman and Lewis' No. 1 Jones, approximately 2 miles north of the Joiner Field, in the Brown Survey, was completed as dry this week at a total depth of 3,707 feet in Georgetown lime. Surface elevation is 495 feet, and the Georgetown was topped at 3,635 feet. This definitely defines the pool to the north, although a former test drilled by E. L. Smith, approximately one-half mile northeast of the Joiner discovery well, limited the field in that direction.

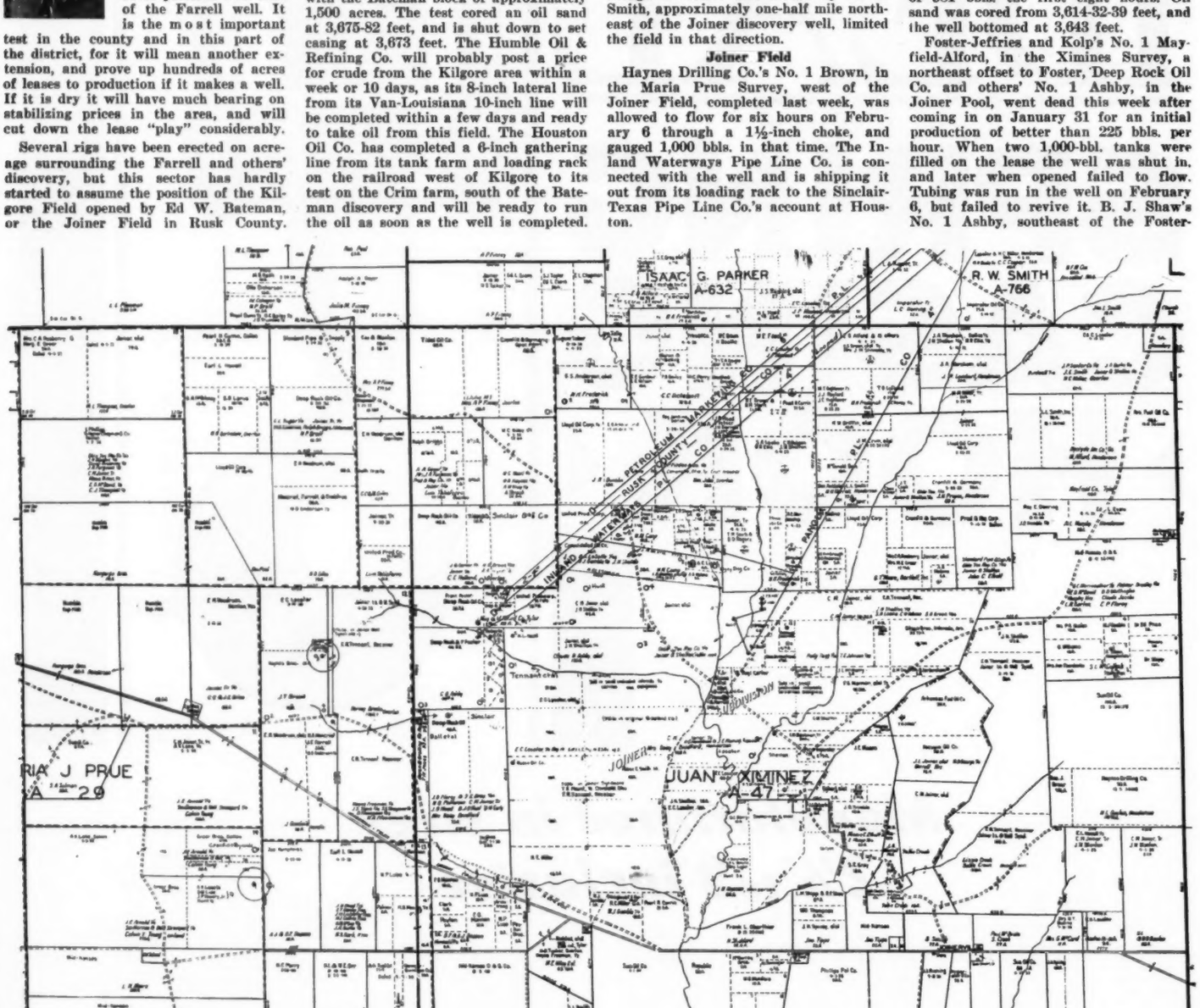
Joiner Field

Haynes Drilling Co.'s No. 1 Brown, in the Maria Prue Survey, west of the Joiner Field, completed last week, was allowed to flow for six hours on February 6 through a 1½-inch choke, and gauged 1,000 bbls. in that time. The Inland Waterways Pipe Line Co. is connected with the well and is shipping it out from its loading rack to the Sinclair-Texas Pipe Line Co.'s account at Houston.

The Panola Pipe Line Co. is connected to Lide and others' No. 1 Young, the well which extended the Joiner Pool to the southwest last week, and is running the oil to its loading rack and shipping out by tank cars.

The Consolidated Oil Co. and others' No. 1 Camp in the Juan Ximines Survey, extended production a short distance to the north in the Joiner Pool this week when it came in for an initial production of 981 bbls. the first eight hours. Oil sand was cored from 3,614-32-39 feet, and the well bottomed at 3,643 feet.

Foster-Jeffries and Kolp's No. 1 Mayfield-Alford, in the Ximines Survey, a northeast offset to Foster, Deep Rock Oil Co. and others' No. 1 Ashby, in the Joiner Pool, went dead this week after coming in on January 31 for an initial production of better than 225 bbls. per hour. When two 1,000-bbl. tanks were filled on the lease the well was shut in, and later when opened failed to flow. Tubing was run in the well on February 6, but failed to revive it. B. J. Shaw's No. 1 Ashby, southeast of the Foster-



Present status of the Joiner Field, Rusk County, Texas, showing two western extensions made last week by Haynes and others' No. 1 Brown, and Lide and others' No. 1 Young, both in the Maria J. Prue Survey. The former makes approximately a 1-mile western extension and the latter almost a 2-mile extension to the southwest of production. Pipe lines serving the field, and in process of construction are also shown on the map.

Deep Rock producer, also refuses to flow although bailed and swabbed for 18 hours on February 5 in an effort to flow it. Lack of gas in these wells is the reason for the wells refusing to flow, and many are of the opinion the field will soon see many pumpers scattered over it, conjecturing that many of the wells now flowing will have to be put on the pump before many months pass.

Bateman Well

The Bateman discovery well, purchased by the Humble Oil & Refining Co., 3½ miles southwest of Kilgore, northern Rusk County, was allowed to flow through a twenty-two-sixty-fourth-inch choke on February 5, making 561 bbls. in the first 19 hours with 210 pounds tubing pressure and 450 pounds casing pressure on the well. It is reported that the company has 26 derricks ready to erect on offset locations on its blocks if they are needed, and an active drilling campaign may be expected in this area within a few weeks.

Harrison and Cass Counties, and also Upshur County, northeast and north of Gregg County, in which the Farrell discovery well is located, is seeing a concerted lease play which has extended over from Gregg. The Weekly Oil Corp. of Fort Worth has staked a location in about the center of the Killingsworth estate in Harrison County. Another test will be drilled by the Corona Petroleum Co. on the Bohler farm in the J. C. Post Survey, same county, and another test has been reported for acreage in the W. H. Payne Survey. Although oil from this district may fall to 25 cents per barrel, it seems not to worry the wildcatter, and while wildcat tests will be few in other districts in the State during the next few months, East Texas will no doubt see many of them drilled.

COMPLETION IN EAST CENTRAL TEXAS

Anderson County

Humble Oil & Refining Co.'s No. 3 J. F. Roberts, oil sand 3,602-31 feet, initial production 40 bbls. per hour, through seventeen-thirty-seconds-inch choke, total depth 3,621 feet.

Navarro County

Young and others' No. 1 J. H. Farmer, dry and abandoned, total depth 960 feet.

Red River County

Buffington and others' No. 1 L. H. Moore, dry and abandoned, total depth 1,824 feet.

Rusk County

Consolidated Oil Co.'s No. 1 W. M. Camp, oil sand 3,614-32-39 feet, initial production 981 bbls. first eight hours, total depth 3,643 feet. Deep Rock Oil Co.'s No. 1 Alford-Mayfield, oil sand 3,613-32½ feet, initial production 3,187 bbls. through 2½-inch tubing with 1,474,000 feet of gas, total depth 3,635 feet. Foster and Jefferies' No. 1 Mayfield-Alford, oil sand 3,599-3,630 feet, initial production 1,844 bbls. first 11 hours flowing through 6⅝-inch casing, total depth 3,630 feet. Lewis and Goodman's No. 1 Oscar Jones, dry and abandoned, total depth 3,711 feet. Haynes Drilling Co.'s No. 1 J. F. Brown, oil sand 3,662-72 feet, initial production 2,458 bbls. first 17 hours through 2½-inch tubing, total depth 3,672 feet. Knox and others' No. 1 M. A. Melton, abandoned location. Lide and others' No. 1 Calvin Young, oil sand 3,677-88 feet, initial production 2,475 bbls. first 18 hours through 2½-inch tubing, total depth 3,688 feet. Roberts Oil Co.'s No. 1 Ashby, oil sand 3,598-3,626 feet, initial production 2,355 bbls. first 24 hours through 3-inch tubing, total depth 3,635 feet. Shaw Oil Co.'s No. 1 Ashby, oil sand 3,611-35 feet, initial production 1,297 bbls. through 2½-inch tubing, total depth 3,638 feet.

Van Zandt County

Pure Oil Co.'s No. 8 A. D. Clark, initial production 80 bbls. through eleven-sixteenths-inch choke, total depth 2,949 feet. Same company's No. 2 R. L. Wells, initial production 99 bbls. through eleven-sixteenths-inch choke, total depth 2,956 feet. Same company's No. 3 G. C. Stewart, initial production 99 bbls. through eleven-sixteenths-inch choke, total depth 2,949 feet. Same company's No. 2 D. O. Mayo, initial production 92 bbls. through eleven-sixteenths-inch choke, total depth 2,938 feet. The Texas Company's No. 5 R. A. Tunnell, initial production 89 bbls. through eleven-sixteenths-inch choke, total depth 2,928 feet. Pure Oil Co.'s No. 1 N. R. Blake, initial production 576 bbls. based on a three-hour test through eleven-sixteenths-inch choke, total depth 2,964 feet.

East Central Texas Production

Daily average production in the pools in the East Central Texas area for the week ending February 7 follows:

Boggy Creek	2,754
Cedar Creek	45
Currie	320
Hill County	30
Mexia	3,915
Minerva	480
Nigger Creek	175
Powell	5,076
Richland	115
Rusk County	5,978
Thrall	35
Van	27,402
Wortham	590
Total East Central Texas	46,915
Week ended January 31	44,347
Increase	2,568

EAST CENTRAL TEXAS WILDCATS

Week Ending February 9

CHEROKEE COUNTY

Lloyd Oil Corp.'s No. 1 Tommie, 200 ft. S of CNL of 59.2-ac. tract in William George Sur., 2 miles SW of Troup ..... Rig (rotary).

McDonald Bros.' No. 1 Newton, center of 113-ac. tract, Thomas Quevedo Sur., 3 miles N of Jacksonville ... Derrick.

Moore & Baker's No. 1 M. M. Tommie, 945 ft. N and 1,300 ft. E, William George Sur. ..... Drlg. 1,266 ft.

DELTA COUNTY

Delta Development Co.'s No. 2 Hays Kinney, 300 ft. S of No. 1 Cooper, Townsite Sur. ..... Shut down 1,558 ft.

D. S. Hoods' No. 1 J. J. Balser, 185 ft. from S and 580 ft. W of Balser 40-ac. tract in SE cor. T. E. Laddin Sur. ..... Shut down 1,559 ft.

Everett Drlg. Co.'s No. 1 Sansivy, 1,320 ft. N and 1,320 ft. W, J. B. Craig Sur. ..... Shut down 2,130 ft.

Worthington and Stedman's No. 1 W. H. Dejehett, 150 ft. from S and 776 ft. from W of 52-ac. tract, E. Chick Sur. ..... Swabbed dry; T. D. 1,585 ft.

FANNIN COUNTY

E. A. Parsons et al's No. 1 Morgan in the English Sur., 3 miles NE of Savoy ..... Shut down 3,501 ft.

GREGG COUNTY

Eslick's No. 1 Church Lot, 150 ft. N and 150 ft. W of N 15 acres, Dolores Sanches Sur. ..... Moving in material.

Bell & Graddy's No. 1 M. George or (Daniels), 225 ft. S and 650 ft. W of 26-ac. tract, Mary Van Winkle Sur. ..... Derrick.

D. H. Felder's No. 1 Elder (Trip), 200 ft. N and 200 ft. W of Elder tract, J. W. McCorry Sur. ..... Rig up.

Foster et al's No. 1 Fisher, 200 ft. N and 200 ft. W of E 98-ac. tract, John Ruddle Sur. ..... Derrick.

M. S. Hammond's No. 1 J. M. Hamby, 278 ft. from E line, 1,667 ft. S of Hamby 3,800-ac. tract, Martin Lant Sur. ..... Drlg. 3,138 ft.

George McCamey et al's No. 1 J. F. Richards, 150 ft. from N and 150 ft. from W of 50-ac. tract, Mary Van Winkle Sur. ..... Set 10-in. csg. 157 ft.

HENDERSON COUNTY

E. L. Chapman's No. 3 Cade, 1,560 ft. from N and 750 ft. W, J. B. Dorsey Sur. ..... Drlg. 4,528 ft.

HUNT COUNTY

Mamie S. Hammond's No. 1 W. H. Adams, center of survey, W of Branson Sur., J. A. McFarland Sur. ..... Derrick blew down.

LAMAR COUNTY

Everett & Allen's No. 1 Guest, 250 ft. S and 2,046 ft. E of 100-ac. tract, L. Roberts Sur. ..... Drlg. 1,390 ft.

LIMESTONE COUNTY

Ben Segall & Hundall's No. 1 A. E. Smith, 750 ft. from E and 300 ft. from S, M. N. Miller Sur. ..... Drill stem test 2,894-2,902 ft.; tested dry; T. D. 2,932 ft.

POLK COUNTY

Sunshine Oil Co.'s No. 1 J. A. Collins, 313 ft. from NE, 150 ft. from SE at right angles to line, A. Viesca Sur. ..... Shut down 3,350 ft.

RAINS COUNTY

Everett & Morrison's No. 1 Franklin, 640 ft. from S and E of 75-ac. tract in John Christian Sur., 6 miles SE of Emory ..... Spudded and shut down.

RED RIVER COUNTY

Droppleman and Bunely's No. 1 J. W. Cunningham, 250 ft. E and 250 ft. S of 180-ac. tract, S. B Shi Sur. ..... Drlg. 2,455 ft.

Everett & Allen's No. 1 E. Howison, 225 ft. S, 185 ft. W of 79-ac. tract, William Humphreys Sur. ..... Derrick.

Everett & Allen's No. 1 Bryan, 1,200 ft. SW of NE cor of Bryan 130 acres, P. Vaughn Sur. ..... Location.

RUSK COUNTY

Alford et al's No. 1 W. L. Thrash, 1,103 ft. from N and 420 ft. from E of SE cor. of B. Smith Sur. ..... Derrick.

Akin & Rayzor's No. 1 Claude Ashby, 1,580 ft. E along N line of Ashby 119-ac. from NW cor., 600 ft. S at right angle to N line, Juan Ximenes Sur. ..... Oil sand 3,614-17 ft.; set 6⅝-in. csg. 3,604 ft.; T. D. 3,617 ft.; (rotary).

Anderson's No. 1 Frederick, 150 ft. E and 150 ft. S of 37.5-ac. tract, Juan Ximenes Sur. ..... Oil sand 3,564-70 ft.; set 6⅝-in. csg. 3,542 ft.; T. D. 3,570 ft.

Anderson's No. 2 Frederick, 50 ft. from S and 150 ft. from W of Frederick 35-ac. tract, Juan Ximenes Sur. ..... Location.

Anderson et al's No. 1 G. T. Moore, 600 ft. from E along S line of tract, Juan Ximenes Sur. ..... Derrick.

Anderson & Co.'s No. 1 Thompson, 150 ft. from N and 150 ft. from E, M. J. Prue Sur. ..... Rig up.

Babcock Bros.' No. 1 Camp, 150 ft. from N and 171 ft. from E of 4-acre tract, Juan Ximenes Sur. ..... Derrick.

Bahaman's No. 1 W. M. Camp, 150 ft. from N and 150 ft. from W of 25-ac. tract, Juan Ximenes Sur. ..... Building derrick.

Universal Oil & Gas Mining Co.'s No. 1 J. T. Brown 150 ft. from E and 150 ft. from S of N 36-ac. tract, M. J. Prue Sur. ..... Drlg. 1,900 ft.

Ball & Malone's No. 1 Bradford, 304 ft. W and 150 ft. N of excess strip off W side of Daisy Bradford 75-ac. lease ..... Drlg. 3,529 ft.

Bateman et al's No. 1 Lois Della Crim, 3,088 ft. W along N line of survey of NE cor. and 400 ft. S at right angles to N line of survey, E. G. Sevier Sur ..... Run tubing; flowed 45 bbls. through eleven-sixteenths-inch choke; T. D. 3,642 ft.

H. W. Blum's No. 1 W. M. Jarnigan, 150 ft. from S, 150 ft. W of 17-ac. tract, J. C. Snow Sur. ..... Derrick (rotary).

Burgoyne et al's No. 1 J. A. Alexander, 693 ft. from E and 400 ft. from S, Thomas Jones Sur. ..... Shut down 3,760 ft.

Burton Drlg. Co.'s No. 1 Clark (Florey), 172 ft. E and 2,282 ft. S of Peter Holmes Sur. ..... Drlg. 1,685 ft.

Capp & Smith's No. 1 J. L. Cochrane, 150 ft. from E and 150 ft. from SE cor. of Cochrane tract, Jacob Roth Sur. ..... Drlg. 2,646 ft.

Roy I. Carter's No. 1 Mayfield-Alford, 150 ft. N and 200 ft. W of most northern NW cor. of 105-ac. tract, Juan Ximenes Sur. ..... Drlg. 853 ft.

Roy I. Carter's No. 2 Mayfield-Alford, 192 ft. from S and 200 ft. W of Carter 200-ac. lease, Juan Ximenes Sur. ..... Derrick.

Cranfill and Germany's No. 1 A. P. Finney, 150 ft. from E and 150 ft. S of Finney 105-ac. tract, Juan Ximenes Sur. ..... Set 10-in. csg. at 340 ft.

Cranfill & Reynolds' No. 1 Calvin Young, 275 ft. from E and 1,780 ft. from S of Young 300-ac. tract, M. J. Prue Sur. ..... Location.

E. L. Chapman's No. 1 A. P. Finney, 150 ft. from W of E 20 acres of 102-ac. tract, Isaac G. Parkey Sur. .... Derrick.

Cordova Union Oil & Land Co.'s No. 1 C. O. Christian, 150 ft. N and 171 ft. W of Christian 36-ac. tract, Robert E. Winn Sur. ..... Rig up.

George Demonstrend's No. 1 J. A. Birdwell, 150 ft. N and 150 ft. E of Birdwell east 73-ac. tract, M. J. Prue Sur. ..... Building derrick.

Dan Dillon et al's No. 1 W. H. Frederick (Jake), 150 ft. from E and 150 ft. from S of 50-ac. tract, Juan Ximenes Sur. ..... Derrick.

East Texas Oil Co.'s No. 1 C. D. Ashby, 856 ft. N and 1,774 ft. from W of Ashby 119-ac. tract, Juan Ximenes Sur. ..... Shut down 430 ft.

Elizy Drlg. Co.'s No. 1 W. M. Camp, 150 ft. N and 171 ft. from E of Camp 28-ac. tract, Juan Ximenes Sur. ..... Rig up.

Federated Oil Co.'s No. 1 Mayfield-Alford, 150 ft. S, 1,221 ft. W of Laird 55-ac. tract, Isaac Ruddle Sur... Drlg. 2,663 ft.; top Pecan Gap 2,607 ft.

Foster and Deep Rock's No. 3 Ashby, 150 ft. W and 45 ft. S of Aiken & Rayzor's No. 1 Ashby, Juan Ximenes Sur. ..... Rig up.

Foster et al's No. 1 Fisner, 200 ft. N and 200 ft. W of E 98-acre tract, John Ruddle Sur. ..... Moving in material.

Foster Oil Co.'s No. 2 Cook, 150 ft. from S and 150 ft. from W, Juan Ximenes Sur. ..... Rig up.

Haynes Drlg. Co.'s No. 2 Brown (Minor on map), 150 ft. from E and 150 ft. from S of Brown 76-ac. tract, M. J. Prue Sur. ..... Spudding.

Heard's No. 1 Peterson, located in Robert E. Wynn Sur., 150 ft. out of NW cor. of Peterson 50 acres .... Drlg. 1,710 ft.

Humble Oil & Ref. Co.'s No. 1 Ben Laird, 150 ft. N and 1,219 ft. W of Laird 100-ac. tract, Isaac Ruddle Sur. ..... Derrick.

Humble O. & R. Co.'s No. 2 L. D. Crim, 1,826 ft. N and 150 ft. S of Sevier Sur. in the L. G. Sevier Sur. ..... Rig up.

Humble Oil & Ref. Co.'s No. 3 L. B. Crim, 2,438 ft. from E and 194 ft. S of Sevier Sur. ..... Rig up.

Hunt's No. 2 Bradford, 1,320 ft. from E and 150 ft. from S of Blk. No. 12, Juan Ximenes Sur. ..... Set 6⅝-in. csg. at 3,511 ft.

Hunt's No. 2 Ashby, 150 ft. from N and 2,213 ft. from W of 119-ac. tract, Juan Ximenes Sur. ..... Set 6⅝-in. csg. at 3,580 ft.; drlg. plug.

H. L. Hunt's No. 3 Ashby, 221 ft. N and 2,530 ft. W of 125-ac. tract, Juan Ximenes Sur. ..... Drlg. plug 3,580 ft.

H. L. Hunt's No. 4 Ashby, 221 ft. from N and 150 ft. from W of most northern NW cor. of Ashby 125-ac. tract, Juan Ximenes Sur. ..... Set 210 ft. 10-in. csg.

H. L. Hunt, trustee's No. 1 Mayfield-Alford, 200 ft. N and 200 ft. W, Juan Ximenes Sur. ..... Rig up.

E. M. Jones et al's No. 1 W. R. Crim, 150 ft. N and 150 ft. W of 50-ac. tract, Robert E. Winn Sur. ..... Top Pecan Gap 2,631 ft.; base 3,062 ft.; coring 3,659 ft.

La-Tex Oil Co.'s No. 1 Major Kennedy, 233 ft. W of survey and 166 ft. from S line of Kennedy 100-ac. tract, Daniel Clark Sur. ..... Rig up.

L. Lloyd Oil Corp. et al's No. 1 Nicey, 150 ft. S and 300 ft. W of 25-ac. tract (NW cor. of county) Thomas Obar Sur. ..... Drlg. 2,300 ft.

(Continued on Page 101)

IDEAL-AJAX Performance

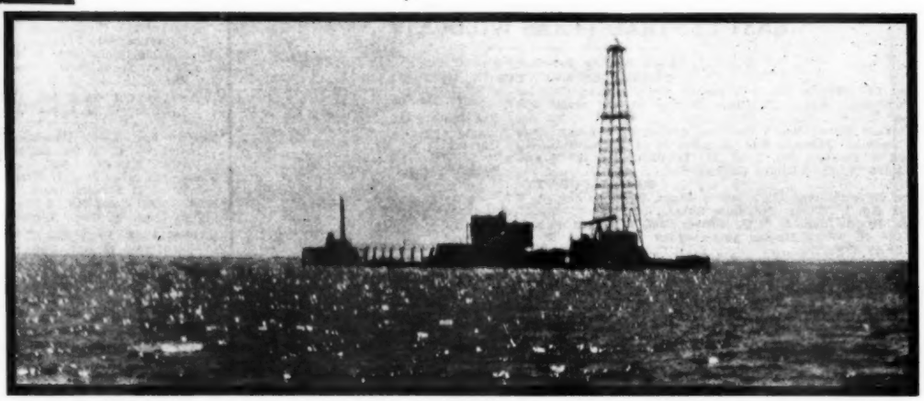
Well No. 5 on School Land 67

FROM this Well No. 5 on School Land 67 drilled by C. E. Galbraith & Co. for the Sinclair Oil & Gas Co. at Oklahoma City to the Rycade well on the Atchafalaya Louisiana Coast . . . out to The Texas Co. operations in the Gulf of Mexico, IDEAL-AJAX Roller Bearing Piston Valve Engines operating with the newest types of boiler with superheaters are establishing records never before dreamed of in oil well drilling.

No other power plant can give the dependable speed and horse power for the size of portable equipment that is now possible with IDEAL-AJAX Roller Bearing Piston Valve Engines used with the latest boilers equipped with superheaters.

For performance stories, ask the National Supply Man. For Engineering Data, address AJAX IRON WORKS, Corry, Pa.

Rycade Well on the Atchafalaya Louisiana Coast.

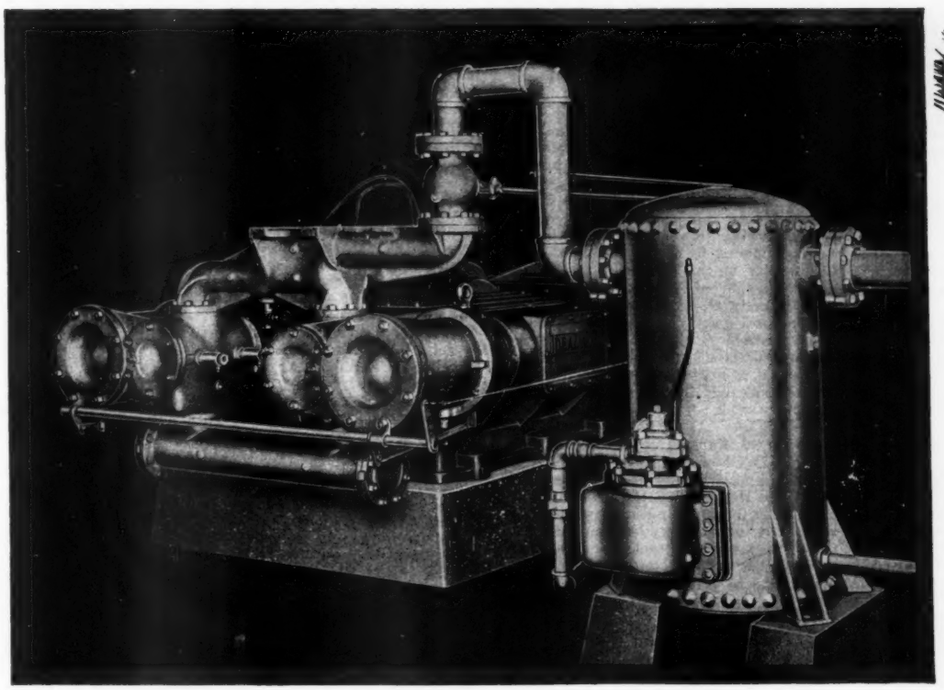


The Texas Co. Well in the Gulf of Mexico.

Under Unusual Conditions

Super Power

IDEAL-AJAX Roller Bearing Engines are built in both balanced slide valve and piston valve types. Roller Bearing Engines with balanced slide valves are recommended for use with low pressure saturated steam. Piston valve type engines are recommended for both high pressure saturated and superheated installations.



Standard equipment with both slide and piston valve types includes extra heavy steam separator receiver with automatic condensation trap.

IDEAL-AJAX

ROLLER BEARING

STEAM DRILLING ENGINES

Pipe Line Construction News

DETROIT SOON TO VOTE ON GAS LINE PROJECT

MUSKEGON, Mich., Feb. 9.—Proposals for a new project to supply Detroit industries and homes with natural gas will be submitted to the city council within 60 days by the American Light & Traction Co. through its subsidiary, the Detroit City Gas Co. The project is said to meet in a general way recommendations contained in a report made some time ago by John H. Morgan, employed to investigate the situation for the city council.

It is understood that interests in control of the Detroit company have concluded a deal with a large public utility combination, said to be the Columbia Gas & Electric System, calling for construction of a Detroit pipe line in 1931. Such an arrangement is expected to win the approval of the common council which has insisted upon unified distribution as the keystone to any natural gas pipe line plan involving Detroit.

The Columbia Gas & Electric Co. recently closed a deal with Moody-Seagraves interests giving the former company access to large gas reserves and calling for engineering participation in building a natural gas network to the Atlantic Seaboard.

Moody-Seagraves interests are behind the Northern Industrial Gas Co. which last year made application to the Detroit city council for a day-to-day permit to enter Detroit with a 390-mile pipe line from Ashland, Ky., estimated to cost $25,000,000.

Under the terms of the new deal, it is understood that Columbia has acquired the right of way for the proposed pipe line laid out last year and would share in the advantages that might accrue through the granting of the Detroit application for a pipe line permit.

Executives of the Northern Industrial Gas Co. last year made a canvas of Detroit and obtained agreements from 13 of the largest industries with prospective consumption of 192,145,000 feet a month in the event a natural gas pipe line were laid to Detroit.

The application placed on file with the city clerk asks for a rate of 39 cents per 1,000 feet although this may be lowered slightly as the result of Mr. Morgan's report which indicates that the stated price was too high.

Several large automobile plants would be among those to use natural gas if it were brought to Detroit.

JOINER FIELD OUTLETS

LONGVIEW, Tex., Feb. 9.—The Joiner Field, Rusk County, was assured of two more outlets this week when the Taylor Refining Co. which has ordered material for an 8,000 or 10,000-bbl. skimming and cracking plant in Tyler, announced that it will build 24 miles of 6-inch line from the pool to this plant which will be located on the Cotton Belt Railroad near the town. G. L. Rowsey is president of the company. The plant is to be electrically operated as is the company's refinery at Taylor, Tex., which is now processing crude from the Joiner Pool.

Another outlet was announced by H. W. Roberts, secretary-treasurer, and general manager of the Beacon Oil & Refining Co., which is constructing a 2,000-bbl. skimming plant 2 miles north of Henderson in Rusk County, on the I. & G. N. Railroad. A 40-car rack is being constructed, and approximately 5 miles of 4-inch line is being laid from the Joiner Field to this location and rack.

FORT WORTH, Tex., Feb. 7.—Tom Cranfill, E. B. Germany and others will organize a new pipe line company to lay a small line out of the Joiner Field, in Rusk County, to a loading rack on the railroad 3½ miles north.

RECEIVE FIRST SHIPMENTS OF PIPE LINE GASOLINE NEAR KANSAS CITY

The first consignment of gasoline in the new 8-inch line of the Great Lakes Pipe Line Co. was delivered at the bulk station near Kansas City, Mo., the past week. The gasoline came from the Ponca City, Okla., refinery of the Continental Oil Co. and the Barnsdall, Okla., refinery of the Barnsdall Refineries, Inc., the first two plants to be connected to the line. The gasoline entered the line on January 27, being released from storage at the Ponca City and Barnsdall refineries.

For almost a week preceding the time that gasoline was actually placed in the line, Great Lakes employes tested its entire length for leaks and other troubles which might result from faulty construction. A continuous stream of water was kept running through the line but no difficulties were encountered.

The fact that this first section of the line has been completed without mishap and according to schedule is considered very promising by Great Lakes officials. The utility of the line as it affects the transportation of gasoline to the mid-western and Great Lakes marketing areas of the participating companies is already being realized; and before the increased business of late spring and summer has arrived, it is predicted that gasoline will be transported throughout the entire length of this 1,250-mile underground artery.

North of Kansas City, all the way through Des Moines to Minnesota's twin cities, Minneapolis and St. Paul, and due east from Des Moines, on a direct route to Chicago, crews of men are working in order that the line may be completed and ready to serve the consumer within a few months. There remain but a few short links to be completed.

Building Stations

At 50-mile intervals along the route, crews are completing brick pump stations.

On the 8-inch line between Kansas City and Des Moines, a stretch 134 miles in length has been completed and 51 miles of pipe still remain to be laid. The Missouri River has been crossed successfully by three 8-inch lines.

The 6-inch line from Des Moines to the Twin Cities has progressed for a distance of 190 miles, more than three-quarters of the total distance. The 6-inch line from Des Moines to the west bank of the Mississippi River has been completed, as is the crossing itself. The construction of the line between the river and Chicago will start in the near future.

Actual construction of a 6 and 8-inch spur line from Barnsdall to Okmulgee, Okla., and a 4-inch line from Okmulgee to Muskogee, Okla., began December 29, and should be completed as far as Okmulgee by the middle of February. Twenty-five miles of line have been completed thus far.

A cross arm telegraph and telephone line will be constructed along the route from Wynona, Okla., to Des Moines, and work on this project was started December 15. According to present plans, the line should reach Kansas City by March 15.

Pump stations will be located at the following points: Barnsdall, Okla.; Independence, Humboldt, Paola and Kansas City, Kans.; Osborne and Ridgeway, Mo.; Osceola, Des Moines, Grinnell, Iowa City, Donahue, Alexander and Carbon, Iowa; Scarboro and Lyndon, Ill.; Faribault, Minn.; and Ponca City, West Tulsa, Okmulgee and Muskogee, Okla. Work has already been started on the Barnsdall, Humboldt, Independence, Paola, Kansas City, Osborne, Ridgeway, Ponca City, West Tulsa, Okmulgee, and Muskogee stations. They are scheduled for completion between February 1 and March 1. Work began on the remaining stations the early part of this month.

Each station is of such attractive design that it bears a close resemblance to a small office building. Considerable space is allowed for windows, thus assuring maximum lighting and ventilation. The red brick walls enclose two main rooms in which are housed two large Diesel engines and two pumps. These

(Continued on Page 100)

Starting the first gasoline at the Ponca City, Okla., pump station of the Great Lakes Pipe Line Co. The two men at the controls are Harry Moreland, vice president and general manager, left; and F. E. Richardson, chief engineer. The men watching the operation are, from left to right: P. A. Ward, secretary and treasurer, Great Lakes Co.; A. L. Struven, construction manager for the Arthur G. McKee Co., engineers and contractors of Cleveland; M. P. Wolfe, industrial sales manager, Winton Engine Corp., Cleveland; Henry Neff, assistant to the chief engineer, Great Lakes Co.; John Grimmett, Great Lakes pilot; A. J. Purinton, chief construction supervisor, Great Lakes Co.; and R. A. Rosborough, construction engineer, Great Lakes Co.

ASSOCIATED OIL LINE TO CARRY GASOLINE

LOS ANGELES, Calif., Feb. 7.—The Associated Oil Co. pipe line from Coalinga to Monterey is being prepared for gasoline transportation, and the company has announced that an extension through Kettleman, Lost Hills and Belridge Fields will be constructed at a cost of about $750,000.

The expanded line will provide a collecting system from the State's newest fields of heavy production of casinghead gasoline. It will utilize tankage heretofore provided at tidewater at Monterey. Facilities for shipment there will also be used in relaying the gasoline by tanker to the company's plant at Avon on the San Francisco Bay.

The capacity of the line will be 5,000 bbls. daily at the outset. One pumping plant at Belridge will handle this amount. Later, it is planned to install a booster plant at Coalinga, which will double the line's capacity, said C. R. Brown, vice president of the Associated.

Further increases in capacity can be provided by additional pumping plants. The pipe ordered from Youngstown Sheet & Tube Co. was the first step in the new construction. The pipe is 6-inch and is grade A, 16.234 pounds. The extension will be 60 miles.

Actual laying of the new line will start about February 15 and will be completed in two or three months, depending on weather conditions.

The old Coalinga-Monterey line has been used for crude transportation for 28 years. After an engineering investigation it was pronounced feasible to clean the line for transportation of a water-white gasoline. Preparations have been launched to weld all collars on the 90-mile line to prevent escape of the highly volatile product. The line was originally constructed of lap-weld pipe with screw joints.

KIRBYVILLE-FRANKLIN LINE

HOUSTON, Tex., Feb. 9.—Despite the swampy condition of part of the right of way on the United Pipe Line Corp.'s new gas line from Kirbyville, East Texas, to Franklin, St. Mary Parish, Louisiana, contractors are making rapid progress in laying of pipe and now are about 10 per cent completed. The contractors, F. C. Youmans Co. and the Sexton Corp. of Texas, are working several crews at various sectors along the system, whose main trunk line extends a distance of 158 miles. Work also is getting under way on several of the lateral lines, so that gas for the entire system, which will comprise a total of more than 350 miles of pipe, will be available for the more than 40 towns and cities on the system by late spring.

HUMBLE LAYING BATEMAN LINE

HOUSTON, Tex., Feb. 9.—Humble Pipe Line Co. has started laying pipe on its new pipe line from the Bateman area of northern Rusk County to Longview, in Gregg County. This line will consist of 14 miles of 8-inch welded pipe and will connect at Longview with the company's 10-inch line which extends from the Van Field of Van Zandt County to Louisiana.

The line is being laid chiefly to handle production of the Humble Oil & Refining Co., which recently purchased Ed W. Bateman's No. 1 Crim, 400 feet from the north line and 2,600 feet from the east line of the tract in the Elbridge Sevier survey, 10 miles north of the new Joiner area. At present the Humble has no plans for continuing the line to the Joiner area.

THE Taubman SUPPLY CORPORATION

Takes pleasure in announcing the construction of two new branches at

KILGORE
LONGVIEW

EAST TEXAS

CHAPMAN VALVES

The opening of these two new branches is in line with the TAUBMAN POLICY of establishing a branch in every important district, to render its customers the usual TAUBMAN 24-HOUR SERVICE. A large quantity in all sizes Taubman Dependable Pipe in transit to both branches ready for immediately delivery.

QUALITY — QUANTITY — SERVICE AT A REASONABLE PRICE BUILT THIS DEPENDABLE ORGANIZATION.

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HOBBS, NEW MEXICO

East Texas Is Threat to Other Fields

Panhandle and North Central Texas May Feel Effects If Proration Movement Fails. Isolated Well in Ward County

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Feb. 9.—Possibilities of a small isolated well in southern Ward County, attracted but little attention to that sector of the Permian Basin this week, in a district which has hit the bottom so far as oil interests are concerned since the three areas of East Texas were discovered.

J. D. Kugle's No. 1 Charles Wallace in Section 19, Block 34, H.&T.C. Survey, approximately 2½ miles southwest of the Bennett producers, in Ward County, topped a pay horizon at 2,448 feet and filled up 1,800 feet with oil when shut down at 2,456 feet. Later it was deepened to 2,460 feet and swabbed and flowed 100 bbls. of fluid in 24 hours ending at 7 a. m. on February 8. This well is not far from another test which had a good showing of oil, but failed to materialize into a commercial producer and extend the Bennett Pool to the south, and it is believed this test will not prove much of a well, although it may make a small pumper. Southern Ward County has not offered much in the line of good producers, and the production is spotted, four small pools producing only around 750 bbls. per day.

Group Oil Corp.'s No. 4-B University in the Big Lake Field, Reagan County, topped another production peak this week, flowing 8,638 bbls. on February 5. It has gained production every day except two since it came in on January 14, 1931. Three inch tubing is being run in the well, but this will probably not cut down the production in the well, as tubing the other deep wells in the field has not brought down the production, some of the wells even gaining since they were tubed. Tubing was ordered by the Railroad Commission to cut down the gas-oil ratio and conserve gas, and due to the depth of the wells special tubing had to be installed, and the wells handled with care to prevent serious trouble.

Andrews County

Deep Rock Oil Co. and others' No. 1 Kuykendall in Section 24, Block A-46, Andrews County, west of the Ogden Pool, is shut down at 4,370 feet to set 6⅝-inch casing around 4,245 feet where the first oil was encountered with 1,000,000 feet of gas. An increase in oil was found from 4,260-70 feet and 4,326-30 feet, about 2,000 feet of oil standing in the hole when the test was shut down for casing.

If this test makes a commercial producer it will extend the Ogden Pool 2½ miles to the southwest, and in the direction of the Fuhrman producer 6 miles to the south. The gas was logged low in the Kuykendall test in regard to the gas horizon in the wells in the Oregon Pool, but oil was found higher than in those wells. At 4,370 feet it is 1,153 feet below sea level, and the oil was found at 1,023 feet below sea level, the present total depth being approximately the same depth as the main pay in No. 1 Ogden, the discovery well of this area.

Western Crane County

Gulf Production Co. and Cranfill Brothers' No. 1 Tubb in Section 8, Block B-27, western Crane County encountered sulphur water this week at 4,622-25 feet and an increase from 4,640-45 feet producing 130 bbls. of fluid, 60 per cent water on February 8 while drilling at 4,780 feet in lime, making 1,600,000 feet of gas from 4,594 feet. This phenomenal well topped a pay horizon below a sulphur water stratum last fall and created great excitement when it flowed 117 bbls. in 13 minutes, but on a 24-hour gauge it showed up as good for only 1,050 bbls., and since drilling deeper has failed to pick up an increase in oil. It was first shut down at 4,303 feet, making the 24-hour gauge of 1,051 bbls.

Cranfill Brothers and Atlantic Oil Producing Co.'s No. 1 Muir, in Section 23, Block B-27, approximately 2½ miles south of the above well, is drilling at 4,300 feet in lime encountering only an odor of oil at 4,268-71 feet. It looks as if this test would be a disappointment, due to the fact that it was supposed to be running higher on the lime, and yet has not had the gas and oil shows found in the first well. Another day or two of drilling will prove whether the Tubb well is a freak or edge well, and the Muir well too far south for production, which may run to the north of the discovery.

Proration in Penn Pool

Proration in the Penn Pool, Ector County, remains unchanged for the latter part of February, a total of 78 wells having an actual potential of 37,344 bbls. daily; producing an allowable of only 6,384 bbls. There are no wells drilling in this field at present.

The outlet of the Howard-Glasscock Pools has been raised to 26,700 bbls., effective February 1 for the present proration period. This is a gain of around 2,000 bbls. Total daily potential is 78,861 bbls. from 530 producing wells. No wells are drilling at the present time in these pools.

WEST TEXAS PRODUCTION
Week Ending February 7

County—	No. wells	Bbls.
Andrews	3	165
Crane	374	20,315
Crockett	50	1,749
Ector	77	6,251
Fisher	10	1,101
Garza		29
Howard-Glasscock	536	26,880
Irion	7	83
Jones	75	1,125
Loving	36	3,000
Mitchell	150	1,973
Pecos	529	94,545
Reagan	255	33,219
Runnels	4	157
Scurry	5	7
Taylor	3	135
Upton	257	5,500
Ward	51	2,646
Winkler	593	51,508
Total production this week		250,388
Total production last week		250,578
Decrease		190

Panhandle District

The Panhandle district showed a drop of 3,091 bbls. per day this week, from 59,491 bbls. to 56,400 bbls. per day, still 16,400 bbls. per day above the allowable agreed upon at a proration meeting held in Fort Worth in December, 1930. The East Texas situation may create a further cut in the demand for Panhandle crude, one of the main purchasers in the old Panhandle fields now entering the new Kilgore area of Rusk County with an 8-inch line, ready to market its own production from a 1,440-acre block.

Krebs and Barnard's No. 1 Barnard, in Section 24, Block 4, I.&G.N. Survey, 4 miles southwest of the Gulf-Noel Pool, in Moore County, which looked like an extension last week, and a well good for around 200 bbls. per day, has proved disappointing during the week in making only around 50 bbls. with an estimated 3,000,000 feet of gas at a total depth of 3,180 feet. It is now shut in for pipe line connections. The granite wash pay was topped at 3,179-80 feet in this semi-wildcat which will probably be shut in for many months to come if it has no better luck in obtaining pipe line connection than many other wells in this district which have been shut in on top of the pay for many months waiting connections which do not come.

The temporary injunction obtained by the Danciger Oil & Refining Co. against the Railroad Commission of Texas to restrain that commission from interfering with producing its properties in the Panhandle is now being tried in the District Court at Austin. This case will have much bearing on future proration in Texas, as other injunctions will be invoked in East Central Texas if the Danciger company wins, for some operators producing small leases, and having contracts or a market demand for their oil will desire to produce their properties even though offset producers have no outlet and cannot produce their leases wide open.

North Central Texas

Another change was made in the proration plans for North Central Texas this week when purchasing companies cut their nominations. Effective February 1, the Humble Oil & Refining Co. started prorating on a 28 per cent basis above the 4-bbl. marginal well allowance. This cut came in Archer, North Young, Wichita and Wilbarger Counties. It also made a cut of 50 per cent of the production above the 4-bbl. marginal well allowance in Cooke, and Montague Counties. The Stanolind Crude Oil Purchasing Co. enacted the same rules. The Waggoner Refining Co. prorated 30 per cent of the potential above the marginal well allowance in Wichita and Wilbarger County. The Continental Oil Co. takes only 2½ bbls. per well from leases in Archer, North Young and Wichita Counties.

The producers in this district are now trying to get the purchasing companies to prorate on a uniform basis, and are asking that the companies take as much as 40 to 45 per cent of the potential above the marginal 4-bbl. per well allowance.

The crude oil prices in the Wichita

(Continued on Page 128)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended February 9

Company, well, farm name, section and block—	Remarks
ANDREWS COUNTY	
Deep Rock Oil Co. et al's No. 1 Kuykendall, 2,310 ft. from N and E of SW cor., Sec. 24, School Blk. A-46	Drlg. 4,359 ft.; top pay 4,245 ft.; 1,800 ft. oil in hole.
Deep Rock Oil Co. et al's No. 1 King, 330 ft. from N and 2,310 ft. from E, Sec. 11, Blk. A-46	Top pay 4,335 ft.; flows every 4 days; temporarily abandoned; total depth 4,454 ft.
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Shut down 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE, Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 1,302 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 920 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.& S.F. Sur.	Drlg. 2,760 ft.
Van McPhail's No. 1 McIntyre, SE cor., Sec. 59, Blk. 352, 7 miles S of Alpine	Shut down 1,750 ft.
COKE COUNTY	
Reed, Hitchens et al's No. 1 Duncan, 1,980 ft. from S and 1,650 ft. from E of Sec. 239, Blk. 2, H.&T.C. Sur. (4,500-ft. cable test)	Rig.
CONCHO COUNTY	
Beesley et al's No. 1 Waring estate, 400 ft. from N and E. Sec. 163, T.&N.O. Sur.	Spudding (standard tools).
Turner et al's No. 1 Borsig, 150 ft. from S of NE cor. G. Emmig Sur. 130, 6 miles W of Paint Rock	Shut down 1,520 ft.
CRANE COUNTY	
Cranfill Bros. and Gulf's No. 1 J. B. Tubb, 2,310 ft. from N and 330 ft. from E of Sec. 8, Blk. B-27, Public School Land	Drlg. 4,750 ft.
Cranfill Bros.' No. 1 Muir, 330 ft. from N and 2,310 ft. from W, Sec. 23, Blk. B-27, Public School Land	Drlg. 4,295 ft.
Duffey et al's No. 1 Cowden Bros. Co. (Gulf), 990 ft. S and W of C, Sec. 81, Blk. X, C.C.S.D.&R.G.N.G. Sur.	Spudding.
CROCKETT COUNTY	
Doleman & Moore's No. 1 Perner, 3,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and shut down.

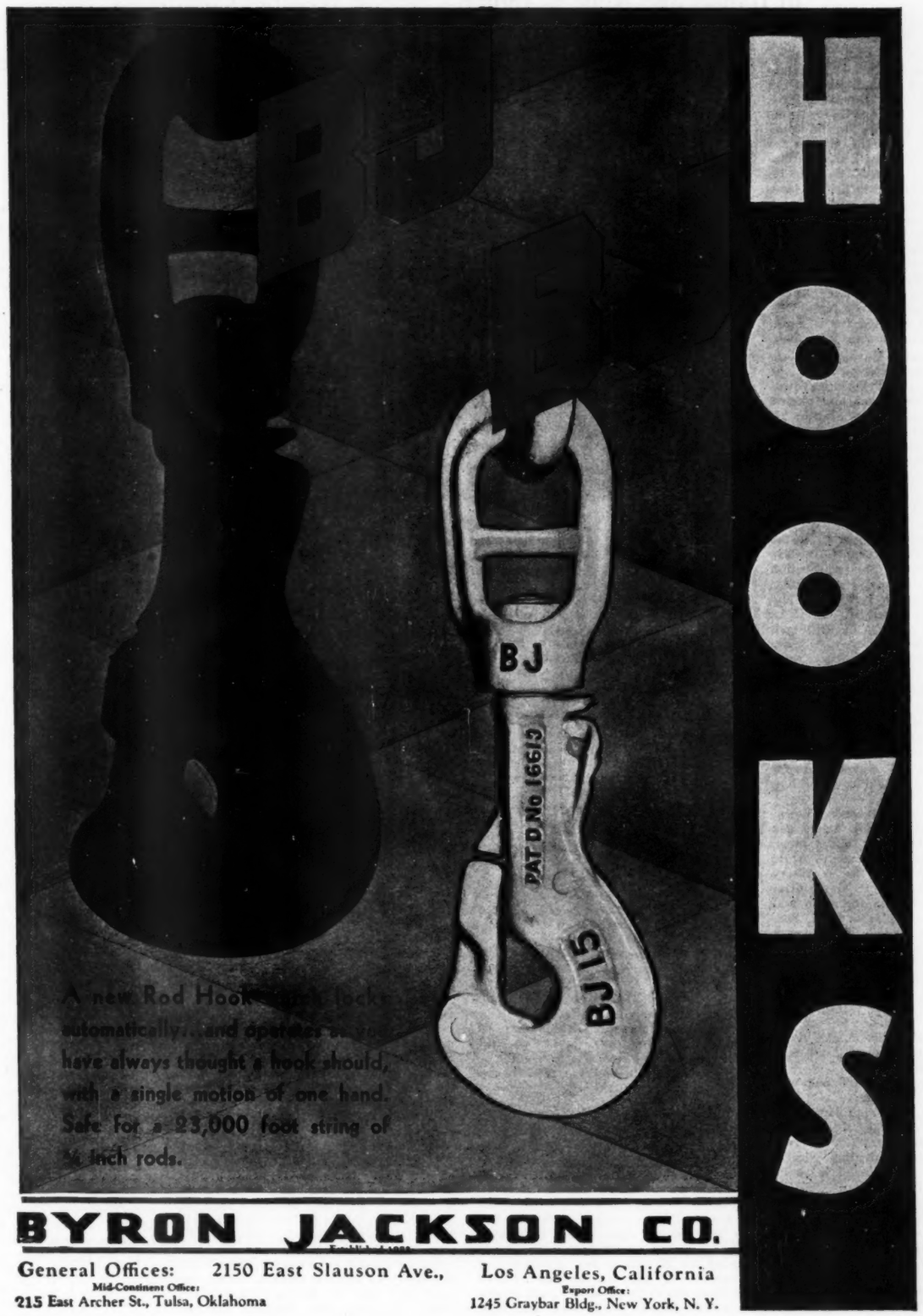
(Continued on Page 101)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending February 9

Company, well, farm name, section and block—	Remarks—
CARSON COUNTY	
Continental Oil Co.'s No. 1-A Jordan, 330 ft. S, 1,320 ft. W, SW, Sec. 123, Blk. 4, I.&G.N. Sur.	Set 10-in. csg. 1,179 ft.
Interstate Prod. Co.'s No. 1 Burnett, C SE, Sec. 100, Blk. 4, I.&G.N. Sur.	Set 8-in. csg. 2,167 ft.
Krebs & Barnard's No. 1 Barnard, 660 ft. S and W. NW, Sec. 24, Blk. 4, I.&G.N. Sur.	T.D. 3,180 ft; T.P. 3,179 ft; spraying 50 bbls. per day; shut in.
Ochsner et al's No. 1 Moore, 330 ft. S and E, NW NE, Sec. 20, Blk. 7, I.&G.N. Sur.	Rigging up.
Plains Holding Co.'s No. 1 M. P. Co. fee, C N 10 ac., N½ NW SW, Sec. 40, Blk. 4, I.&G.N. Sur.	Rig on ground (rotary).
Plains Holding Co.'s No. 1-A Kolka, 660 ft. N, 710 ft. E, NE NE, Sec. 43, Blk. 4, I.&G.N. Sur.	Drlg. 500 ft.
Red River Gas Co.'s No. 5-A Bivins, 1,320 ft. S, 660 ft. E, Sec. 45, Blk. B-20, G.&M. Sur.	Rigging up rotary.
Texas Interstate P. L. Co.'s No. 1 Burnett, C S½ SE, Sec. 81, Blk. 5, I.&G.N. Sur.	Drlg. 900 ft.
Texas Interstate P. L. Co.'s No. 1 Burnett, C E½ SE, Sec. 51, Blk. 5, I.&G.N. Sur.	Spudding.
CHILDRESS COUNTY	
C. L. Sloane et al's No. 1 B. P. Smith, Sec. 49, F. P. Knott lands	T.D. 5,000 ft.
COCHRAN COUNTY	
Continental Oil Co.'s No. 1-B Slaughter, 4,950 ft. N and E. of League 134, Armstrong County School Lands	Drlg. 2,340 ft.
COLLINGSWORTH COUNTY	
Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 21, H.&G.N. Sur.	Fishing 525 ft.
COTTLE COUNTY	
Darby Oil Co. and Merry Bros. & Perrini's No. 1 Richards, 330 ft. NE, Sec. 13, B.S.&F. Sur.	Drlg. 2,375 ft.
GRAY COUNTY	
Adams, Prince et al's No. 1 Morse, 330 ft. NE SE, Sec. 6, Blk. 26, H.&G.N. Sur.	Estimated 7,000,000 ft. gas 2,050 ft; estimated 17,000,000 ft. gas 2,245-60 ft; T.D. 2,300 ft; fishing tools.

(Continued on Page 104)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Sixteen Completions in Central Ohio

Seven New Locations and 25 Spudding. Two Completions in Illinois and None in Indiana, Due to Weather Conditions

By George A. Whitney
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Feb. 9.—The Ohio Fuel Gas Co. drilled a small well on the Andrew Burnison farm, Section 8, Pleasants Township, Hardin County, and the Kemrow Co.'s No. 1 R. E. Winter farm, Section 10, same township, is also a very light gas producer from the Trenton lime at 1,385 feet. In the same township, the Pleasants Oil & Gas Co. is starting No. 4 Minnie Burnison farm. In Cessna Township, same county, Eagan & White's No. 1 Oscar Stiner farm, Section 12, is reported showing for 10 bbls., and No. 2 same farm, showing for 5 bbls.

In Wyandot County, Murphy and others found a small gas well on the F. E. Chamberlain, Section 5, Tymochtee Township. The test of Newcomer and others, on the Richard Carter farm, Section 21, Pitt Township, same county, found top of Trenton at 1,361 feet and at 83 feet in that well-known farm, failed to make either an oil or gas showing and will be drilled deeper.

In Seneca County, O. S. Barnaby and others' test on the John Feigelist, Section 20, Eden Township, is given up as a failure at 1,228 feet. Arthur Geyer has a duster on the H. E. Swartz, Section 25, Hopewell Township, same county. Trenton was topped at 1,427 feet and went 160 feet in to a total depth of 1,587 feet. Sandusky Gas Co. is drilling a second test on the Eli Rosenberger farm, Section 25, Liberty Township, same county.

CENTRAL OHIO

Sixteen completed wells were reported from the Central Ohio Field of which 4 were producers with an initial of 134 bbls., 3 dry holes and 9 gas wells. There were 7 new locations staked out for wells and 25 started spudding, a total in new work of 32.

In Ashland County, Jackson Township, the Ohio Fuel Gas Co. has a gas well in No. 1-5,326 D. Clyde Donley farm, Section 11. In Lake Township, Gold Crown Oil & Gas Co.'s No. 6 Harry Horn, Section 21, pumped 10 bbls. initial from 573 to 633 feet, and Robinson and others' No. 4 Barbara Easley farm, Section 9, also pumped 10 bbls. in 24 hours from 547 to 598 feet.

In Medina County, the Ohio Fuel Gas Co.'s No. 10-5,361 C. H. Litchfield farm, Lots 13 and 14, Chatham Township, is a gas well in the Clinton lime. Same company is drilling No. 2 Ira Cleveland, Lot 20, and Edson and Son's No. 12 Harcus Frank farm, Lot 20, was dry. Sand from 406 to 435 feet was broken and at from 470 to 483 feet was dry.

In Lorain County, Columbia Township, Ohio Fuel Gas Co. got a gas well in No. 1-5,409 C. E. Lehman farm, Lot 73. Dillon & McFredericks are drilling Nos. 1 and 2 E. N. Gilpin farm, No. 1 being in Lot 72, and No. 2 in Lot 73.

In Wayne County, Cannan Township, the Kemrow Co.'s No. 2 B. Hill, Section 9, is credited with an initial oil production of 19 bbls. in the lower Clinton formation from 3,162-77 feet.

In Holmes County, the Arkansas Fuel Oil Co.'s No. 4 James T. Patterson farm, Section 10, Monroe Township, produced 5 bbls. natural, but will be given a shot in hopes of increasing the output. The pay was found from 3,535-85 feet.

Knox County

In Knox County, Union Township, the Upham Gas Co. struck a rank duster in No. 4 L. A. and J. M. Lower farm, Section 23, at from 2,867-2,916 feet.

In Coshocton County, Perry Township, the Preston Oil Co.'s No. 1-1,460 Alonzo VanWinkle farm, Section 14, produced 95 bbls. initial from 3,081-3,132 feet.

In Summitt County, Greene Township, East Ohio Gas Co.'s No. 1 W. J. Caston farm, Section 25, is a gas well from 4,118-41 feet.

In Muskingum County, Rich Hill Township, the Atha Co. is drilling a second test on the William T. Osborne farm, Section 7, also made a location for a test on the Henry Corbin and others' land, Section 3, Wayne Township, same county. Fritz Oil & Gas Co. is drilling on the Eliza J. Dozer farm, Section 3, Brush Creek Township.

In Athens County, Ohio Fuel Gas Co. has a light gas well in No. 1-5,365 G. E. Anderson farm, Sections 4 and 5, Ames Township, and is drilling No. 4-5,467 N. A. Chester farm, Section 4. Mosure and others have given up their No. 3 Lena L. Bean, Section 18, Cannan Township, as a dry hole. Clifford and others are starting a second well on the George E. Wyatt, Section 31, Berne Township.

In Lawrence County, Rome Township, C. C. Wolfe and others are at work on the Charles Darling farm, Section 33, and H. K. Ferguson is drilling No. 1 F. M. Kiser farm, Section 14, Hamilton Township, same county.

In Stark County, Melford Oil Co. is drilling No. 1 James C. Easterday farm, Section 35, Jackson Township.

In Fairfield County, Pleasants Township, Wiser Oil Co. has a light gas well on the Lemuel Hite farm, Section 24, in the Lime formation, but was dry in the Clinton.

In Belmont County, Somerset Township, M. W. Fulton and others' No. 1, on the Lee and Cora Hastings farm, Section 27, is a very light gas well in the Berea sand from 1,821-32 feet. Washmuth and Callahan's No. 2 C. J. and M. E. Huntsman farm, Section 25, is a light gas well in the Berea from 1,834-40 feet. W. C. McBride, Inc., is drilling No. 3 N. E. Slevin farm, Section 27, same township. John Jefferies and others are drilling No. 1 Gallagher-Burkhart farm, Section 33. M. W. Fulton and others made a location for No. 4 N. E. Slevin, Section 27, same township.

In Lake County, G. G. Trowbridge's test on his own farm, Lot 48, Concord Township, struck a light gas pay sand in the Red sand from 3,085-3,148 feet, then went into the Clinton from 3,151-57 feet, and was found dry in that formation.

In Jackson County, Milton Township, Kessler and others are drilling No. 1 H. S. Willard farm, Section 6, and in Lick Township, Edwin and E. A. Jones are drilling No. 1 Eliza A. Jones, Lot 99.

In Meigs County, Rutland Township, Kiggins and others drilled in a gas well on the Alfred Plummer farm, Section 24. Chase and others are drilling No. 1 Anna Reese farm, Section 8. In Salisbury Township, Leiflight and others' test on the M. C. Hartung farm, Section 33, is a gas well in the Maxon sand, topped at 840 feet and drilled 17 feet, then to a total depth of 857 feet. Cochran and others are drilling No. 3 Roy C. Sansbury farm, Section 35. Funk and others are drilling No. 1 H. F. Johnson, same section, and Scioto Oil & Gas Co. is drilling No. 1 Cora Russell farm, same section. The Great Bend Oil & Gas Co. is drilling on the Henry E. Theiss farm, Section 34, Lebanon Township, and E. E. Martin and others are drilling on the J. G. Miller farm, Section 3, Chester Township.

INDIANA-ILLINOIS

No completions were reported from any section of Indiana, although several are near the pay sand, while Illinois had only two completed. This is usually the case in both States at this season of the year, when weather conditions are bad.

The two completions for Illinois are in the western part of the State, one being Kroeger and others' No. 1 Fred Metler farm, Section 34, Sugar Loaf Township, St. Clair County, in the Dupo Field, which is reported at only 5 bbls. initial, the other being a dry hole drilled by T. J. Collins and others, No. 1 Phil Siebolt farm, in Renault Township, Monroe County. In Monroe County, Columbia Township, Donaway and others are drilling on the Addie Delaney farm, Section 7, and Chambers and others are drilling on the Hy Huch farm, Section 24, Monroe Township. Minther-Goethe Co. is drilling on the Fred Stutz farm, in the Fosterburg area of Madison County.

In the Dupo Field of St. Clair County, G. P. Hironimus and others have abandoned No. 1 J. P. Alexander tract, in Section 21, Sugar Loaf Township, and Kroeger and others have started drilling No. 2 Fred Metter, in Section 34, same township.

In the Casey Township Field of Clark County, Stifol, Hammer and others are starting a test on the J. C. Lawrence farm, Section 36, in the oil-producing field in the eastern part of the State.

REVISED OFFICIAL FIGURES FOR ALBERTA CRUDE OIL PRODUCTION

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Feb. 7.—Revised official figures of Alberta crude oil production for 1930, compiled by C. C. Ross, supervisory mining engineer, and issued by R. G. Reid, provincial minister of lands and mines, show a total production for the year from all Alberta fields of 1,433,844 bbls., or 53,844 bbls. more than the earlier estimates of Alberta production. The 1930 total of 1,433,844 bbls. compares with a total of 999,152 bbls. in 1929.

According to the same official figures, the December production for the Alberta fields was 175,572, compared with 94,354 bbls. in December, 1929, an increase of 81,218 bbls.

Detailed figures for 1930 show that the major portion of the production came from the Turner Valley Field. Turner Valley production included 1,314,039 bbls. of crude naphtha from the deep lime and 50,345 bbls. of light crude from upper horizons. Light crude production from the Red Coulee Field aggregated 50,345 bbls. for the year. Heavy crude production came from three different areas: the Wainwright Field, with 9,739 bbls.; Ribstone Field, with 1,873 bbls., and the Skiff Field, with 3,731 bbls.

Figures for the Turner Valley Field as given in the official report are considerably in excess of the aggregate of monthly pipe line runs, due to the fact that the government figures include oil sold in the field in addition to deliveries to the refining companies.

In the Turner Valley Field, crude naphtha was in 1930 obtained from 73 wells, though of these only 44 produced for seven months or longer. A number of the best wells came into production toward the close of the year. Light crude in the same period came from 13 wells, of which 8 were in the list of crude naphtha producers during part or all of the year. Some light crude wells have been producing for three years and one is good for 37 bbls. a day. Another that started at 77 bbls. at the end of nine months declined to 47 bbls., when it was decided to deepen to the lime. The light crude production does not represent the full possibilities of the field, as a number of wells shut off the light crude production while deepening to the naphtha horizon in the lime.

Red Coulee Field

The Red Coulee Field had an aggregate production of 53,917 bbls., with September the peak month with 7,072 bbls. In December production was down to 6,357 bbls. This, of course, represents merely production from the four wells on the Alberta end of the international structure. The wells average around 62 bbls.

In the heavy crude fields, production does not represent the possibilities even of the wells already opened, these possibilities being dependent on satisfactory markets for the heavy crude and its products. Some refining is being done in small local plants in the Wainwright Field, but the Ribstone output was limited to the amount required for field use as fuel and for testing. The Skiff production was practically all used for fuel in the field.

Dominion Bureau of Statistics figures of production for November, 1930, for all Canadian fields show an aggregate petroleum production for that month of 160,726 bbls., against 171,352 bbls. in October. Alberta output for that month consisting of 140,128 bbls. of naphtha, 9,630 bbls. of light crude and 594 bbls. of heavy crude, represented 93 per cent of the total. For the same month natural gas production for all Canada totaled 2,841,803,000 feet, an increase of 4.38 per cent over the same month in 1929. Alberta wells produced 69 per cent of the total for November, 1930.

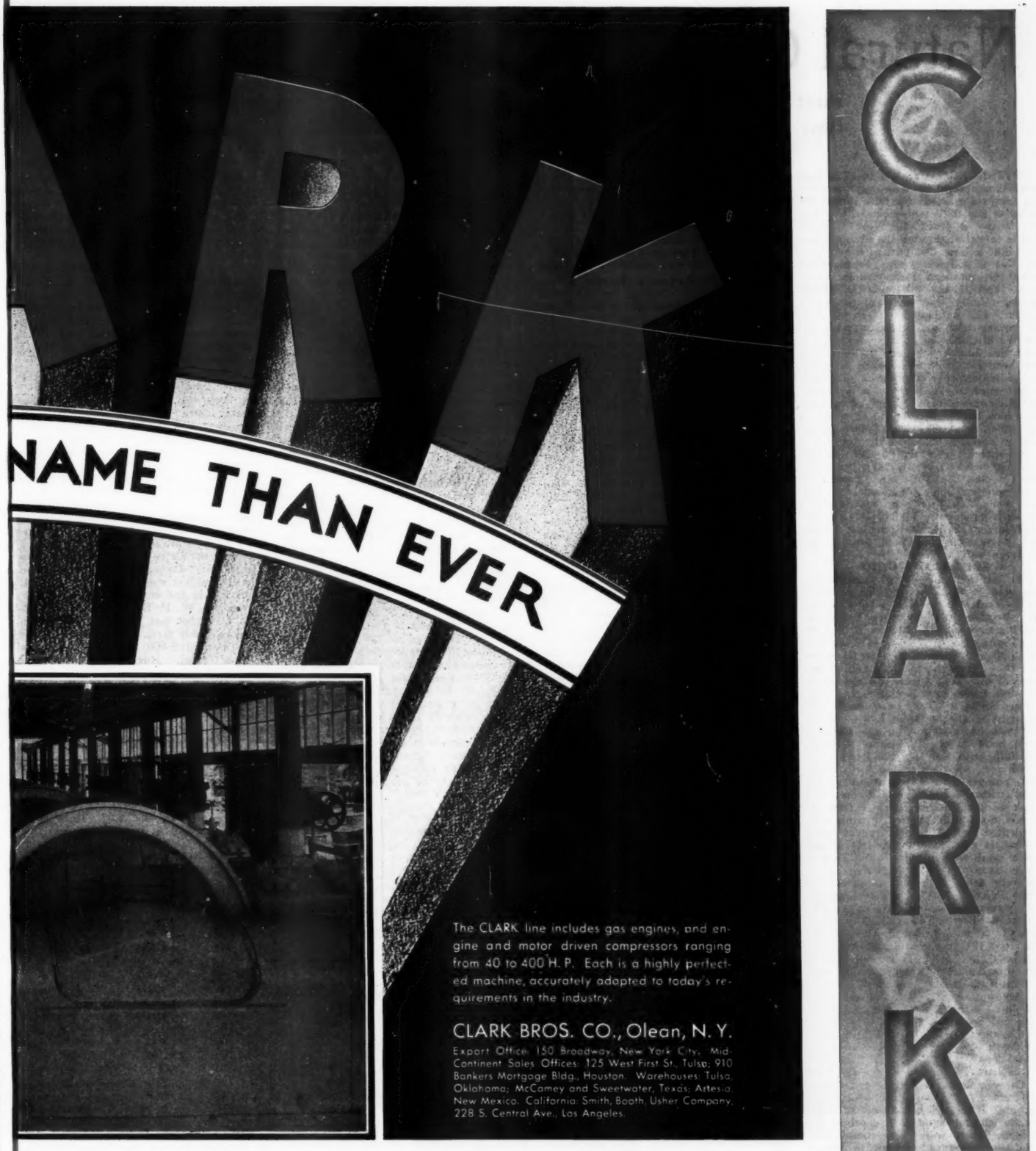
Ontario Production Up

John Scott, inspector of oil wells for the southwestern Ontario fields, reports that unrevised figures, which are not yet available for publication, indicate a considerable increase in crude oil production for the last six months of 1930 over the same period in 1929.

Imperial Tests

In South Turner Valley, two new tests have been definitely added to the Imperial Oil, Ltd., drilling list. In the far south end of the field, Merland Oil Co.'s No. 1, Section 27-18-2w5, has been tested for some weeks by Imperial drillers to determine the feasibility of deepening to the lime. The well has been standing for some months at 4,878 feet, with tools and drill pipe in the hole. The lost drill pipe has been recovered and the hole cleaned out and a rotary outfit is being rigged up to resume drilling. Under its agreement with the Merland Oil Co., Imperial Oil, Ltd., will complete the test in return for 50 per cent of the production. The Merland well is one of the most interesting in the Turner Valley, due to the fact that it is the most southerly test yet drilled. More than a year ago it entered the Dalhousie sands, encountering a strong flow of wet gas with

(Continued on Page 115)



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CLARK

COMPRESSORS

Natural Gas Delivered to Washington

First Section of Major Development Program Completed. Best Oil Well in Several Months in Muskingum County, Ohio

By Staff Correspondent

PITTSBURGH, Pa., Feb. 9.—The long awaited movement of natural gas to eastern markets started with the initial delivery of gas to Washington, D. C. The gas is moved from the West Virginia Fields eastward through the Manufacturers Light & Heat Co., part of the Columbia Gas & Electric Co.'s system, lines along the southern Pennsylvania boundaries and thence to Rockville, Montgomery County, and eastward to Washington. The natural gas is to be used for mixing with artificial gas made by the Washington Gas Light and Georgetown Gas Light companies. This is the first section of the development program of the major gas interests in the East to be completed and will be a means of absorbing the present surplus of natural gas which has been a disturbing element, and which would not have been surplus with a normal industrial market.

The scarcity of water has been acting as an additional check on drilling. In spite of this, 33 wells were completed in the eastern fields, 15 gassers, 10 dry holes and 8 oil producers with an initial daily production of 233 bbls., somewhat larger than the preceding weeks. This increase is accounted for by the one large well reported.

SOUTHEAST OHIO

The best well for several months was completed in southeast Ohio by the Pure Oil Co. on its Lloyd McKee lease in the SW Section 6, Jackson Township, Muskingum County. It was drilled in the Clinton sand at a depth of 3,134 feet and produced 206 bbls. the first 24 hours after shot. This is the fifth well of the Pure Oil Co. on this lease, all the previous wells being good producers.

Other wells in Ohio were small. In Ashland County, the Great Lakes Oil Co. continued its operation on the Barbara Easly heirs farm in Section 9, Lake Township, with No. 4 in the Berea sand at 656 feet. It is showing for a 2 or 3-bbl. pumper. In Athens County, the Union Drilling & Producing Co. completed a test on the Charles Kontner farm in the SW Section 23, York Township. It was drilled in the Clinton sand at 3,380 feet and is good for 228,000 feet of gas with a small showing of oil and 18 feet of nice sand.

A very fair gas well was completed by the Preston Oil Co. in a test on the J. T. Myers farm of 80 acres in the SW Section 6, Perry Township, Coshocton County. It was drilled in the Clinton sand at 3,161 feet and is showing for about 850,000 feet. This well had a light showing of oil and may be shot after the rock pressure weakens. Another fair gas well was the test of the Ohio Fuel Gas Co. on the W. Schurner farm in the SE Section 44, Strongville Township, Cuyahoga County. It was completed at a depth of 3,100 feet and is good for 800,000 feet.

In Holmes County, the Arkansas Fuel Oil Co. completed No. 4 on the James T. Patterson farm, Lot 11, Monroe Township, and it is making about 12 bbls. from the Clinton sand at a depth of 3,607 feet. There were three completions in Jefferson County, and all in Island Creek Township. In the NE Section 22, William Graham and others drilled a test on the G. W. Green farm in the Berea sand at 1,300 feet and it is a small pumper good for about a half barrel a day. In the same quarter section, Elliott & Co. completed a test on the Cora B. Lemon farm in the Berea sand at 1,250 feet and this well was a dry hole. In the NE Section 19, the Sanders Oil Co. completed a second test on the John Spahn farm in the Berea sand at 1,400 feet and it is a quarter barrel pumper which may not be operated.

Medina County

In the shallow sands of Medina County, there were two additional completions. On Lot 20, Section 16, Chatham Township, E. R. Edson & Son Co. completed No. 10 on the M. A. and Eva Franks farm to a depth of 483 feet. It was a dry hole. On Lot 4 of Section 13, the same operator drilled No. 13 on the George W. Packard lease No. 1 to a depth of 460 feet. It was likewise a dry hole.

In the SW Section 6, Licking Township, Muskingum County, the Hopewell Fuel & Gas Co. completed a second test on the John C. Sidle farm in the Clinton sand at a depth of 3,196 feet. This well may make a very light pumper after shot. In Perry County, the Wehrle Co. completed a test on the Frank Hammond farm in the NE Section 21, Clayton Township. It was drilled in the Clinton sand at a depth of 3,399 feet and is a dry hole.

Bay and Weppler and others completed No. 4 in the shallow territory in Washington County. It was on the Christopher Lauer farm, near Warner, Lot 40, Salem Township, and produced 5 bbls. the first day after shot in the Buell Run sand at 319 feet. On Paw Paw Creek, Lot 146, same township, R. L. Wright drilled a test on the J. W. Holshu farm and found the Buell Run sand dry to a depth of 368 feet.

Drilling in Ohio

In Section 7, Hanover Township, Licking County, the Pure Oil Co. has rigged up for a second test on the Lavirtie Earhart farm. In Athens County, Park Bowser and others are drilling their test on the G. W. Riley farm, Section 20, Alexander Township, and have reached 800 feet. In Section 23, Waterloo Township, the Grass Run Oil & Gas Co. is down to 575 feet on the P. R. Devore farm. In Canaan Township, Charles D. Mosher and others are drilling No. 9 on the Lena L. Bean farm.

In Noble County, Frank Worral and others are drilling on the J. B. Hutchison farm, Section 12, Jackson Township. In Enoch Township, Way Wickens and others have rigged up for a second test on the J. M. Rowlands farm, Section 32. In Marion Township, the Ohio Fuel Gas Co. is down to 300 feet on the W. W. McClintock farm, Section 32. In Washington County, the Swingle Oil Co. has reached 1,130 feet on the Clarence McGrew farm, Section 7, Palmer Township, and in Fearing Township, Lot 134, John T. Cleary and others are drilling at 200 feet a second test on the Jacob Morningstar farm.

WEST VIRGINIA

There was not an oil producer completed in West Virginia during the week in the 13 completions. There were 3 dry holes, and 10 gassers reported, one of which was a large Maxon sand well.

The best gasser for several weeks in West Virginia was in Boone County, where the well-known operator, Godfrey L. Cabot, completed a test on the John Dickinson farm in Sherman district. It was drilled in the Maxon sand at 1,984 feet and is showing initially for about 3,700,000 feet. In the same district, the same operator completed No. 42 on the Federal Coal Co. tract to a depth of 3,329 feet and it is a light gas well.

There were four completions in Calhoun County, the best being F. F. McIntosh's No. 3 on the Allen Hardman farm in Sherman district. It struck the pay in the Salt sand at 1,680 feet and is showing for over 1,500,000 feet. In Center district, Godfrey L. Cabot completed a test on the Lewis Little farm in the Injun sand and it is a fair well. In Sherman district, C. B. Lewis and others completed a test on the Calhoun County Poor Farm. It was drilled in the Injun sand at 1,883 feet and is a fair gas well. In the same district, W. H. Bickel drilled a test on the Louis Bennett farm also in the Injun sand and at 1,931 feet and it is showing for 100,000 feet a day.

In Kanawha County, the United Fuel Gas Co. had a duster in No. 2,505 on the J. M. Johnson farm. It was also drilled to a depth of 1,998 feet. This farm is in Cabin Creek district. In Mannington district, Marion County, Sutton Brothers completed a second test on the C. A. Thomas farm at 2,215 feet. The top of the Big Injun was struck at 2,178 feet and gas found at 2,190 feet. It will make a fair gas well.

In Marshall County, the Manufacturers Light & Heat Co. drilled its test well on the George Miller farm in Liberty district deeper to 2,667 feet and have a fair gas well at the lower sand. In Monongalia County, on the waters of Jakes Run, Clay district, the Pittsburgh & West Virginia Natural Gas Co. drilled its test on the S. J. John farm from the Injun sand in which the gas was exhausted to the Bayard sand at 3,250 feet. It is now showing for about 150,000 feet a day from the Bayard sand. In Battelle district, the Duquesne Gas Co. completed a test on the Martha Six farm at 2,671 feet and have a gas well.

In Ritchie County, Richards & Co. completed a test on the W. B. Kibbie farm in Clay district about 1 mile south of Ellenboro. It went in the Injun sand and was a dry hole. In Spencer district, Roane County, Paul Weekly and others had a similar result in a test on the G. M. Sergent farm.

Drilling in West Virginia

In Ritchie County, Morris and others are down to 1,450 feet on the Isaac Weekly farm in Grant district. In the same district, J. F. Deem and others have rigged up on the W. W. Lawrence farm, and the Continental Oil Co. has made a location for a second well on the N. T. Mason farm. The Carnegie Natural Gas Co. has reached 1,780 feet on the S. C. Waller farm, and C. R. Lamp and others 1,930 feet in their old test on the Ama Dotson farm which is being drilled deeper. Both of these are in Grant district as also No. 4 of the Cairo Oil Co. on the Phillip Deem heirs' farm for which a location was cleared last week. In Murphy district, C. B. Lewis and others have a rig standing on the W. P. Baker farm, and Godfrey L. Cabot has made a location on the J. N. Eddy farm. Huffman and others have reached 1,800 feet on the Emory Wilson farm, Murphy district, and Joshua Haught and others 700 feet in a second test on the Joshua Haught farm.

In Gilmer County, DeKalb district, the following work is noted: Clem Morris and others spudded in and started drilling on the W. F. Roberts farm and shut down at 75 feet waiting on water. F. G. Davis and others shut down for water at 600 feet on the Alva J. Hardman farm. McCall and others are rigging up on the W. A. Moore farm, and L. C. Waggoner has rigged up on the A. L. Radabaugh farm. Frank Golden and others have a rig standing on the H. E. Engle heirs' farm. The Bowser Oil Co. is down to 1,800 feet in a second well on the John R. Ralston farm. In Center district, McCall and others are down to 1,800 feet in a second test on the Homer S. Westfall farm, and the West Virginia Utilities Co., 2,369 feet in a second well on the Waldo Bush heirs' farm. The Carnegie Natural Gas Co. has made a location for No. 3 on the L. Wilmoth farm.

In Putnam County, J. V. Reishman has had to shut down at 900 feet for water on the William Dent farm, Scott district. H. C. Zogg has made a location for No. 3 on the Maddox heirs' lease, and the Celia Oil & Gas Co. No. 5 on the John Tormey farm, both Scott district.

In Liberty district, Marshall County, G. B. Patterson is drilling at 550 feet on the Mary Chase heirs' farm. In Webster district, Frye and McCracken are down to 2,250 feet on the Harvey Knight farm. In Sandhill district, the Myers Oil Co. has a rig standing on the C. M. Strickland farm. In Cameron district, the Manufacturers Light & Heat Co. has the following work under way: No. 3,483 on the W. B. Hicks farm drilling at 2,350 feet; No. 3,463 on the William and A. Archer farm drilling at 350 feet; No. 3,461 on the Marshall County Bank lease drilling at 2,330 feet; and a rig standing for No. 3,380 on the W. H. Roper and others lease.

SOUTHWEST PENNSYLVANIA

There were two small oil wells completed in Southwest Pennsylvania along with two gassers and a dry hole. In Beaver

(Continued on Page 115)

HANCOCK COUNTY MOST ACTIVE AREA IN THE OIL FIELDS OF KENTUCKY

By George A. Whitney

OWENSBORO, Ky., Feb. 9.—Most of the present development in Kentucky is located in the southeast part of Hancock County, where good wells are being found around the extremely shallow depths of 250 to 275 feet and in the Jett sand, and it is the most attractive section to operate in the Tri-County Field. Producers in the Scottsville and Bowling Green Fields of Allen and Warren Counties, are now pleased that the Illinois Pipe Line Co. is once more taking the product of the two counties.

In Ohio County, near Reynolds Station, the Wood Oil Co. drilled in a nice gas well in a second test on the Reynolds farm. Same company drilled a dry hole in No. 1 on the Thorp heirs farm, in Daviess County.

Hupp & Duff drilled in two new gas wells, Nos. 3 and 4 on the John Crow west 60 acres, in the southeastern part of Hancock County, and are now drilling No. 5, same farm.

Ohio Oil Co.'s No. 1 on the Lee Murray farm, in McLean County, is reported with an initial production of 12 bbls. from a total depth of 1,400 feet, while the McLean Development Co.'s No. 2 on the G. B. McManama 150 acres, same field, produced 40 bbls. initial at a depth of 1,087 feet.

In Eastern Kentucky, the Petroleum Exploration Co. made a location on the W. S. Allen farm, in the Manchester Field of Clay County, and is drilling No. 5 on the North Jelico Coal Co.'s land, in the Harbourville Field of Knox County. No late reports have been made of the work being done by the Southeastern Gas Co. in the Prestonburg Field of Floyd County. T. J. Asher is drilling No. 2 on the J. A. Hemminger farm, near the Clay County line, in the Red Bird area of Bell County. Wade Harley and others are drilling No. 1 Sam Lackey farm, 2 miles south of Kingston and 2 miles east of Richmond, in Madison County.

In McLean County, McLean Development Co. is starting No. 3 G. B. McManana farm, and the Ohio Oil Co. is starting No. 2 Lee Murray, same area.

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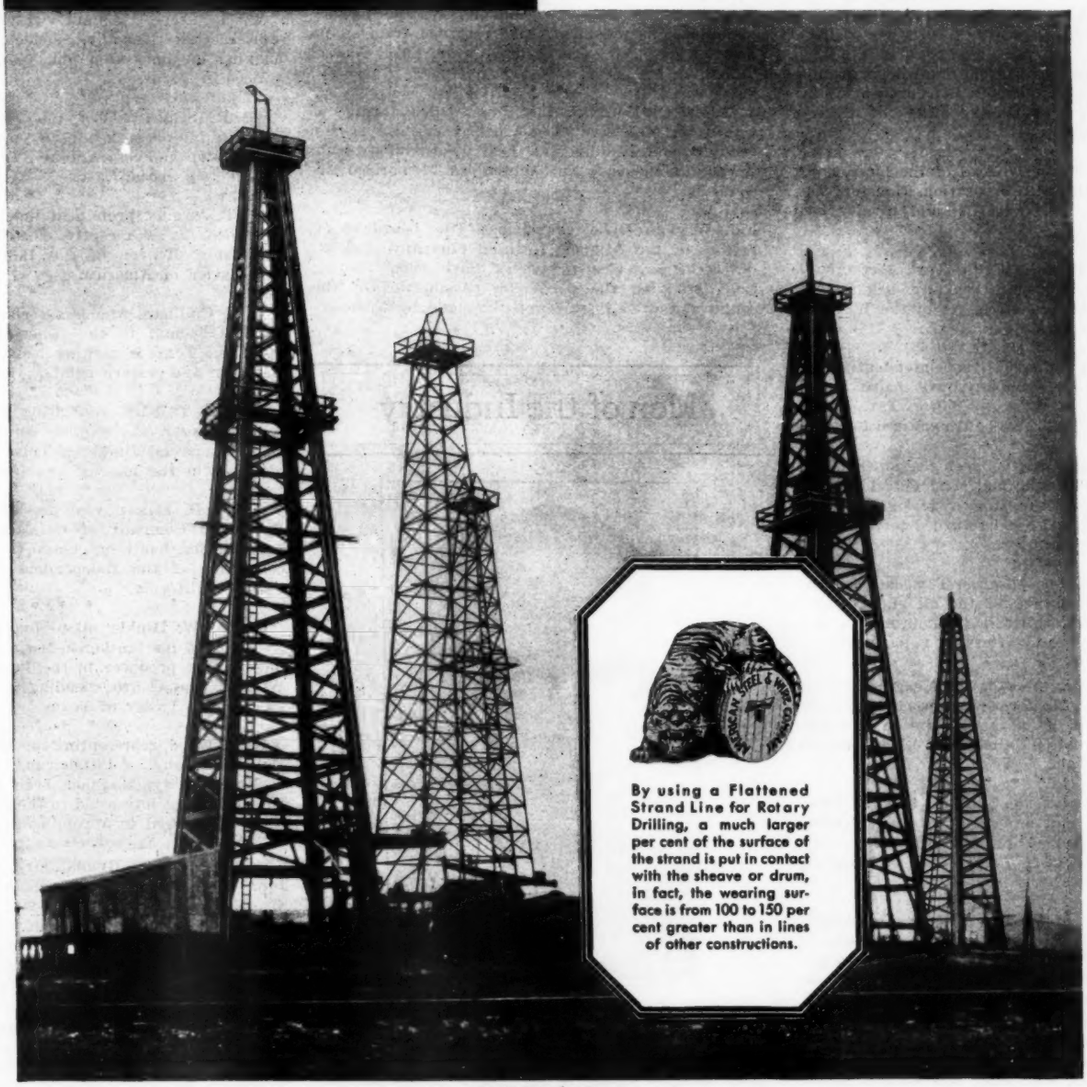
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Personal Paragraphs About Oil Men

W. F. Morgan, San Antonio, Tex., oil operator, was a recent business visitor in Houston, Tex.

* * *

B. A. Hardy, vice president of the Argus Production Company, Dodge City, Kans., has been in Houston, Tex., several days on business.

* * *

Joseph Bruner, sponsor of the Bruner oil field in Caldwell County, Texas, has recently been in New York for several weeks on business matters.

* * *

H. J. Johnson, of the Gulf Refining Company, formerly located at Fort Worth, Tex., has been transferred to the Pittsburgh, Pa., offices of the company.

* * *

Franklin Devine, head of the land department of the Mexican Gulf Oil Company, stationed at Mexico City, Mexico, has been visiting offices of the company at Houston, Tex.

* * *

J. O. Ehlinger, formerly head of the land department of the Rycade Oil Corporation, Houston, Tex., is now engaging in the leasing and royalty business for himself.

* * *

J. D. Bright, Wichita Falls, Tex., secretary of the Deep Oil Development Company, has resigned to join the accounting department of the Waggoner Refining Company at Electra, Tex.

* * *

I. H. McVickers, district superintendent of the Stanolind Pipe Line Company, will move his offices from Healdton, Okla., to Bowie, Tex. Five or six other employes will also be transferred to Bowie.

* * *

Cornelius Schnurr, district geologist at Oklahoma City, Okla., for the Mid-Continent Petroleum Corporation, has finished making a geological survey of the East Texas area, and returned to the capital city.

* * *

Luther Swift, of Nacogdoches, Tex., has been appointed deputy supervisor of the oil and gas division of the Texas Railroad Commission in District No. 14, with headquarters at San Angelo.

* * *

Paul McCarathy is the new chief engineer of the Ohio Oil Company. He formerly was chief engineer of the Producers & Refiners Corporation and later general manager of the United Pipe Line Company, Salt Lake City, Utah.

* * *

E. R. Rich, vice president of the General Petroleum Corporation and a director of the Standard Oil Company of New York, and Mrs. Rich, have left Los Angeles, Calif., the last of January for New York, via Havana.

* * *

J. F. Jeffries, for the past five years district sales manager for the Standard Oil Company of California in the Los Angeles district, has been promoted to be assistant general sales manager of the company with headquarters in San Francisco.

* * *

E. H. Salrin, president of the Tidal Oil Company, New York, flew to Tulsa to attend H. D. Mackenzie's funeral. Mr. Mackenzie was statistician for the company at Fort Worth, Tex., and highly respected by company officials and friends.

* * *

William C. Whaley, assistant to the late Fred Fortine, vice president and general manager of the Barnsdall Oil Company of California, has been appointed general superintendent of field development, in which capacity he will be in charge of the Barnsdall's drilling operations in California.

* * *

Charles L. Reese, formerly director of the chemical department of E. I. du Pont de Nemours & Company, Inc., Wilmington, Del., and more recently its chemical consultant, retired from active service with the company January 1. Doctor Reese has been connected with the du Pont company since June 1, 1902.

Joseph E. Walsh, of San Antonio, Tex., has recently been on a business trip to New York and other eastern cities.

* * *

W. T. Thom, Jr., associate professor of geology at Princeton University, was a guest of the Houston Geological Society at a luncheon February 3.

* * *

Mr. and Mrs. Eric Hussey have returned to Petrolia, Ontario, from Punjab, India, where Mr. Hussey has been drilling for a British oil company.

* * *

E. H. Buckner, president of the Houston Oil Company, Houston, Tex., and W. W. Blocker, assistant to the president, have returned from an inspection trip of several days over East Central Texas.

* * *

Milton G. Kerr, of the Union Oil Company of California, delivered the principal address at the regular monthly dinner of the California Petroleum Accountants Society on "Manual vs. Memorized Accounting."

* * *

J. W. Van Dyke, chairman of the board of directors of the Atlantic Refining Company, and W. M. O'Connor, vice president, have been visiting Cuba studying the petroleum possibilities of the country, and to inspect reports made by the company's engineers.

Men of the Industry

Roy William Carver

Roy William Carver, assistant superintendent of the land department of the Rio Grande Oil Company, is well known in California oil circles. He had several years' experience in the land leasing department of the Superior Oil Company after which he became affiliated with George F. Getty, Inc., serving that company in the same capacity. He saw active service with the United States Army in the A.E.F. in the World War and after recovering from injuries received he was sent to Stanford University in 1919 by the Government. Upon receiving his degree he devoted one year to the brokerage business before entering the land leasing division of the Superior Oil Company.

Mr. Carver's duties as assistant superintendent of the land department of the Rio Grande are in connection with the company's California activities. Mr. Carver has passed most of his life in California where he has a host of friends and business acquaintances. His headquarters are in Los Angeles.

E. L. Bell, of Drumright, Okla., has been installed as president of the Petroleum Motor Transport Association of Oklahoma.

* * *

A. G. Maddren, chief geologist of the United Gas Company, Houston, Tex., has resigned to operate independently as a consulting geologist.

* * *

John G. Phillips, Jr., president of the Southwest Supply Company, Bartlesville, Okla., has been making a business trip to Fort Worth, Tex., and Shreveport, La.

* * *

E. O. Shreve, assistant vice president of the General Electric Company, Shenectady, N. Y., has been making an inspection and visit to the company's offices in Texas.

* * *

O. R. Seagraves, of the Moody-Seagraves and Morgan interests, has been spending several days in Houston and San Antonio, Tex., following an extended trip in the East.

* * *

A. T. Jergins, prominent independent operator of California, was recently elected president of the California division of the Independent Petroleum Association of America.

* * *

C. S. Cullinan, who is associated with his father, J. S. Cullinan, in the American Republics, Inc., Houston, Tex., is making a month's trip through northern and eastern points.

* * *

Charles T. Kirk, consulting geologist and petroleum engineer, has recently established an office in the Commercial Building, Tulsa. He has been specializing in the natural gas industry problems.

* * *

James B. Elliott, vice president of the Jamison Petroleum Company of California with offices in Los Angeles, has been chosen to head the executive committee of the Independent Petroleum Association of California.

* * *

George W. Hinkle, oil producer and drilling contractor, and his brother-in-law, Clifford Lathrop, an independent producer in the Peabody Pool, both of Wichita, Kans., are spending a few weeks in the Rio Grande Valley of Texas.

* * *

W. A. Wood, representing the Pittsburgh Equitable Meter Company, of Pittsburgh, Pa., who has offices in Kansas City, Mo., has been visiting the Rocky Mountain area interested in the various gas projects being considered in Wyoming and in Montana.

* * *

Doctors Manuel Guadalajara, Edmundo Luongo, Jorge Hernandez Guzman, J. A. Monslavo Casado, Siro Vasquez Madriz and Jose A. Delgado Figueredo have just started a period of two years' study in the Mid-Continent and California oil fields to prepare themselves to be petroleum inspectors for the Department of Fomento in the Venezuelan oil felds.

* * *

Fred B. Ely, formerly petroleum geologist for the Standard Oil Company of New Jersey in foreign and domestic fields, has organized the Natural Gas & Petroleum Research Corporation, with offices in the Chanin Building, New York, for the purpose of conducting a consulting advisory and management service.

* * *

The following officials of the Sinclair Consolidated Oil Corporation and subsidiaries recently made an inspection trip over East Central Texas and the Gulf Coast areas, visiting Houston and Fort Worth, Tex.: H. F. Sinclair; C. E. Crawley, vice president: Henry L. Phillips, president of the Sinclair Oil & Gas Company, Tulsa; Wesley Gish, vice president of the same company, Tulsa; H. B. Smith, vice president of the same company, Tulsa; John Manion, president of Sinclair-Texas Pipe Line Company; A. B. Sloan, vice president of the same company, Tulsa; W. A. Martin, general production superintendent of Sinclair Oil & Gas Company, Tulsa.

Oil Men Photographed By The Journal's Cameras

1—Eastern business men and officials of the Plymouth Oil Co. visiting the Big Lake Field, Reagan County, Texas. Left to right: J. C. Hollister, New York; J. G. Farquhar, secretary-treasurer, Plymouth Oil Co., Pittsburgh, Pa.; Wiley Reynolds, Jackson, Mich., host of the party; A. L. Romine, Cleveland, Ohio; Levi Smith, president, Big Lake Oil Co., Texon, Tex.; J. L. Clevenger, Jr., New York; J. C. Adams, attorney, Tulsa, Big Lake Oil Co.; and C. E. Beyer, general manager, Big Lake Oil Co., Texon, Tex. 2—R. M. Parker, stillroom foreman, and J. P. Raborn, process foreman, Barnsdall refinery, Okmulgee, Okla. 3—J. W. Shroyer, W. B. Horne and T. J. McDonnell, crew of Southern States Co. tubing wells in the Oklahoma City Field, Oklahoma. 4—K. B. Yost, Keystone Royalty, Inc., Midland, Tex., and G. W. Snider, Darby Petroleum Corp., San Antonio, Tex. 5—G. M. Mills, main line inspector, Lone Star Gas Co., Dallas, Tex. 6—H. V. Foster, president, Indian Territory Illuminating Oil Co., and Henry L. Doherty, head of the Doherty interests. 7—T. R. Sullivent, stenographer; P. Quirk, record clerk; C. Lemon, shipping clerk; and J. L. White, chief clerk, Barnsdall refinery, Okmulgee, Okla. 8—C. A. Anderson, C. I. Thompson, W. L. Healer, and A. C. Harper, Lone Star Gas Co., West Texas.

Natural Gas Industry Developments

OKLAHOMA NATURAL APPEALS RATE SLASH

The Oklahoma Corporation Commission has refused to entertain proposals of the Oklahoma Natural Gas Corp. to prevent immediate effectiveness of an order to reduce the gate rate of gas 10 cents per 1,000 feet.

The order, affecting Oklahoma City, Tulsa and 45 other state cities served by the company, was filed effective as of February 1. It would effect a reduction in domestic gas costs for approximately 450,000 customers.

The corporation filed notice of an appeal from the order; a motion to vacate the order, and an appeal for supersedeas, through which the company sought to hold up the effectiveness of the order until appeals may be heard and acted upon.

The corporation commission denied the motion of the corporation to vacate the order and also denied an application for filing of supersedeas bond.

The gas company attorneys immediately advised the commission that the case will be appealed to the supreme court.

E. C. Deal, president of the Oklahoma Natural Gas Corp., commenting upon the corporation's action to vacate the rate reduction order, said:

"Our income has been gradually decreasing in spite of the fact that the present owners of the company in slightly more than three years have expended considerably more than $20,000,000 on extension, improvements and betterments of property and service. In many places over our system the relative prices of fuel oil and coal are below the price we pay for gas at the well. In recent months our deliveries of industrial gas have been as much as 30,000,000 feet per day less than they were in previous years.

"We wanted to show to the commission and the public generally that we are delivering gas to the homes and industries of Oklahoma at rates that are lower than those charged by any other major company in the United States served by an extensive and dependable pipe line system. We take pride in the fact that we have been delivering gas for both home and industrial use at rates greatly below those charged in Dallas, Fort Worth, Wichita Falls and other cities in Texas, as well as rates lower than those charged in California and Kansas. I mention these three States because all of them produce vast quantities of gas, and two of them are greater producers of gas than Oklahoma. Our rates are a distinct advantage to our people, and are at present barely sufficient to produce the revenue necessary to keep service up to a high standard.

"Then the chairman of the commission summarily and without notice, adjourned the hearing and promulgated his order from the bench slashing the rates. Had we been given the opportunity, to which we were entitled, of presenting our side of the case, we have every confidence that our friends and consumers throughout the State would have joined with us."

NATURAL GAS FOR NAVY YARD

Natural gas is now used in the Mare Island Navy Yard at Vallejo, Calif. It has been made available by the extension of long distance pipe lines from the Kettleman and Buttonwillow Fields to the entire region of San Francisco Bay.

Three million feet of natural gas a day are used for various purposes at the Mare Island Navy Yard. Cooking, heating, water heating, and generation of steam in the living quarters and in the hospital consume part of the natural gas.

ANALYSIS OF TURNER VALLEY GAS BY FUEL RESEARCH LABORATORIES

CHATHAM, Ontario, Feb. 7.—A report compiled by R. V. Rosewarne, engineer of the Oil and Natural Gas Section of the Fuel Research Laboratories at Ottawa, and dealing with the analysis of Turner Valley gas, has just been issued by the Mines Branch of the Federal Department of Mines at Ottawa. The report in part is as follows:

"During the past two years the fuel testing division of the mines branch has conducted investigations on natural gas produced in Canada, special attention having been devoted to the Turner Valley Field in Alberta. The purpose of the work was to assist in the conservation and more efficient utilization of this valuable fuel. It is obvious that as a preliminary the composition of the gas must be known as exactly as possible. Since sufficient data was not available, an effort was made to obtain it in the hope that it would suggest methods for increasing the recovery of crude naphtha from the gas and point the way for utilization of the surplus gas in other directions. Accordingly, samples of gas from this field were obtained and subjected to fractional distillation in a special Podbielniak apparatus in order to determine the relative amounts of methane, ethane, propane, butane, pentane and higher hydrocarbons present. A representative portion of each sample was reserved for additional determinations to show the specific gravity and the percentages of helium, carbon dioxide, oxygen and nitrogen present. Some samples of crude naphtha and of 'stabilizer gas' were also taken and analyzed. The sulphur present in the gas is the subject of a special investigation, the results of which will be reported separately.

"The writer received valuable assistance from the various oil and gas companies operating in the field as well as from other government departments, both provincial and federal. The Royalite Oil Co., the faculty of the Provincial Institute of Technology at Calgary, and the staff of the Supervisory Mining Engineer, both in Ottawa and in Calgary, deserve special mention, and their hearty co-operation at all times is gratefully acknowledged.

"This report is intended to serve as an interim report. Additional tests and determinations are being made as rapidly as possible at the Fuel Research Laboratories, and complete reports of the work done will follow in due course.

"The summarized results of analyses are shown in tabular form below. Where not otherwise described, the samples were taken by ordinary water displacement from the pipe line near the well after the gas had passed through the separators. The separators are cylindrical units used for removing crude naphtha from the gas prior to its being purified for use as city gas or going to waste as surplus gas.

"The 'stabilizer gas' is that given off by the crude condensate from the separators when the condensate is being conditioned or stabilized before shipment to the refineries. The samples of stabilizer gas are not necessarily representative of the operation and therefore no conclusions of a definite nature should be drawn from the results of analysis shown in this report. The composition of this gas will naturally vary according to the composition of the crude condensate being treated, the method of operation of the unit, the amount of throughput, and probably on several other factors that have not been investigated so far.

"The results shown in the table were obtained in all cases from the analysis of a single sample, except in the case of gas from the Royalite well No. 19, and the purified gas from Calgary city mains. The results shown in these two cases are the average of three and seven analyses respectively. All of these analyses agreed closely with the average given. The values shown in the table are based on per centage by volume in all cases. That shown for methane includes the percentage of all other gases present whose boiling point is near or below that of methane. That shown for pentanes includes all hydrocarbons whose boiling points are higher than that of pentane. All of the samples shown were taken and analyzed during 1930, except the three taken in 1929 that are so indicated and are included in the table for purposes of comparison."

Sample—	Helium per cent	Methane per cent	Ethane per cent	Propane per cent	Butanes per cent	Pentanes plus per cent
Advance No. 5-A	0.007	87.2	6.6	3.7	1.7	0.8
Associated No. 1	0.007	88.4	6.4	2.4	1.3	0.5
British Dominion No. 3	0.008	....	....	....	....	....
Calmont No. 2	0.008	88.2	6.0	3.4	1.7	0.7
Dalhousie No. 5	0.009	85.0	7.4	3.8	2.1	1.7
Dalhousie No. 7	0.010	87.4	6.6	3.6	1.4	1.1
Foothills No. 1	Trace	88.7	5.7	3.3	1.5	0.8
Foothills No. 3	0.009	89.0	4.8	3.6	1.8	0.8
Home No. 1	Trace	88.9	6.3	3.2	1.2	0.5
Home No. 3	0.008	87.6	6.8	3.3	1.6	0.7
Lowery No. 1	0.008	88.3	5.4	4.0	1.6	0.7
Mayland No. 1	0.010	87.0	7.0	3.5	1.7	0.9
McDougal-Segur No. 2	0.007	87.2	7.3	3.4	1.4	0.7
McDougal-Segur No. 4	0.007	87.7	6.6	3.5	1.6	0.6
McLeod No. 4	0.014	....	....	....	....	....
Mercury No. 3	.....	89.0	5.2	3.7	1.5	0.6
Model No. 1	0.008	....	....	....	....	....
Regent No. 1	0.010	88.3	5.9	3.5	1.6	0.6
Royalite No. 6	0.009	88.5	6.5	3.3	1.3	0.5
Royalite No. 17	Trace	88.3	6.2	3.4	1.5	0.6
Royalite No. 18	0.007	89.8	4.7	3.3	1.7	0.4
Royalite No. 19	0.008	88.1	6.5	3.4	1.5	0.6
Royalite No. 23	0.009	87.6	6.4	3.4	1.7	0.9
Spooner No. 1	0.008	87.4	6.6	3.7	1.6	0.7
Sterling-Pacific No. 1	0.008	86.8	7.0	3.6	1.8	0.9
Purified gas from Calgary mains (1929)	.....	89.1	5.5	3.2	1.3	0.9
Stabilizer gas (1929)	.....	25.3	13.6	29.4	23.3	8.4
Stabilizer gas (1930)	Trace	36.3	20.7	15.7	16.9	10.4
Crude naphtha from separator (1930)	....	4.1	4.4	9.4	16.6	65.5
Crude naphtha from refinery (1929)	....	....	....	2.3	10.1	87.6

COALINGA GAS PLANT VOTE

LOS ANGELES, Calif., Feb. 7.—With a vote of 1,008 out of a registration of 1,300, Coalinga decided to retain ownership of the present municipally-owned gas system, the electorate rejecting the offer of the West Side Gas Co. to purchase the plant by a vote of 611 to 397.

REDUCED RATE ASKED

CHATHAM, Ontario, Feb. 7.—City councils of Calgary and Lethbridge, Alta., are planning to negotiate for a 25-cent gas rate on or after April 1, when the present rates, fixed by mutual agreement with the Canadian Western Natural Gas Co. in 1926, expire.

MIDWEST REGIONAL GAS SALES CONFERENCE

The mid-west regional gas sales conference will be held at the Hotel Sherman, Chicago, Ill., February 12 and 13. The tentative program includes the following papers:

What's Ahead for the Gas Industry, by R. W. Gallagher, East Ohio Gas Co.; Natural Gas—Its Significance to Midwestern Cities, by B. J. Denman, vice president, United Light & Power Co., Chicago; Changing Over Consumer Equipment to Natural Gas, by F. J. Gunthner, Iowa-Nebraska Light & Power Co., Lincoln, Nebr.; Developing Natural Gas Sales After Change-Over, by J. J. Brennan, Memphis Power & Light Co., Memphis, Tenn.; In Independence, Missouri, by L. L. Garner, Jackson County Light, Heat & Power Co., Independence, Mo.; In Eastern Nebraska, by Stanley Taber, Iowa-Nebraska Light & Power Co., Lincoln, Nebr.; Preparing for House Heating With Natural Gas, by J. D. Preble, Public Service Co. of Northern Illinois, Chicago, Ill.

The Mid-West Regional Gas Sales Council is composed of: C. A. Nash, chairman, United Light & Power Co., Davenport, Iowa; F. M. Rosenkrans, vice-chairman, Gas Service Co., Kansas City, Mo.; C. A. Gould, regional secretary, Peoples Gas, Light & Coke Co., Chicago; E. J. Boyer, Minneapolis Gas Light Co.; M. B. Buckley, Kansas City Gas Co.; E. L. Callahan, Central Public Service Corp., Chicago; A. F. Davey, Wisconsin Public Service Corp., Sheboygan, Wis.; W. R. Evans, Peoples Gas Light & Coke Co., Chicago; D. H. Frazier, Jr., Battle Creek Gas Co.; F. S. Fugate, Detroit City Gas Co.; E. L. Hinchcliff, Middle West Utilities Co., Chicago; C. H. Kallstedt, Western United Gas & Electric Co., Aurora, Ill.; G. C. Klopf, William A. Baer Organization, Inc., Chicago; R. O. Jasperson, Milwaukee Gas Light Co.; Stanley Jenks, Northern Indiana Public Service Co., Hammond, Ind.; W. L. Jones, St. Louis County Gas Co., Webster Groves, Mo.; E. Longgood, Northern Indiana Public Service Co., Hammond, Ind.; C. A. Luther, Peoples Gas Light & Coke Co., Chicago; F. X. Mettenet, Indiana Electric Corp., Indianapolis, Ind.; W. F. Miller, Public Service Co. of Northern Illinois, Chicago; Ira Steele, Des Moines Gas Co.; Louis Stein, Northern States Power Co., Minneapolis, Minn.; J. K. Swanson, Minneapolis Gas Light Co., and Stanley Taber, Iowa-Nebraska Light & Power Co., Lincoln, Nebr.

LONGMONT, COLO., FRANCHISE

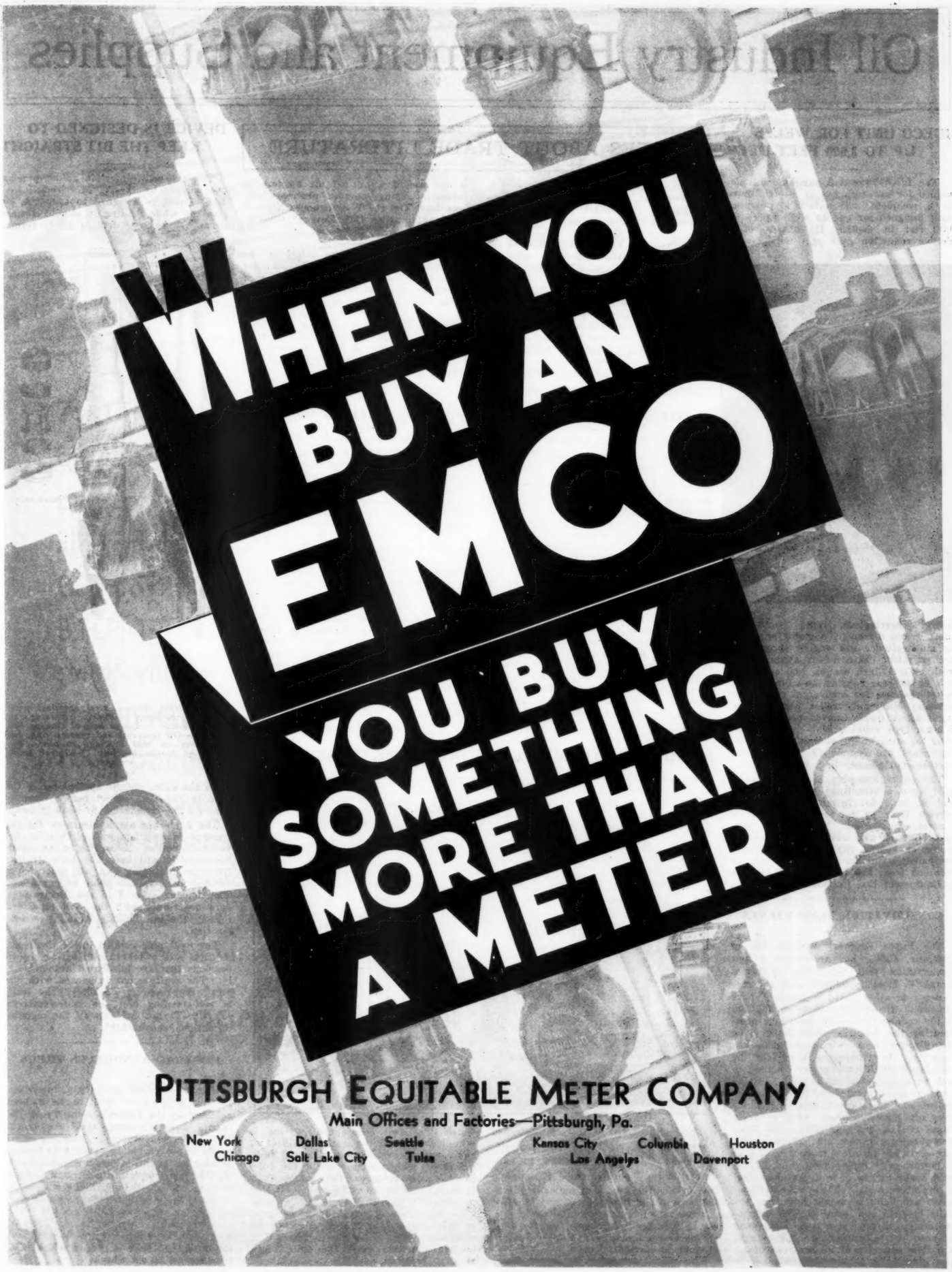
The city council of Longmont, Colo., has granted a 20-year natural gas franchise to the Public Service Co. of Colorado, a subsidiary of Cities Service Co. Gas will be supplied from the Amarillo, Tex., pipe line, which is now within 1 mile of Longmont. The company plans to start work on the distribution system as soon as frost is out of the ground.

MAY BUY OHIO NATURAL

CHICAGO, Feb. 9.—Negotiations are under way for the Appalachian Gas Corp. to acquire control of an Ohio natural gas company supplying public utilities serving 300 communities. The Appalachian corporation also operates through the Texas Gas Utilities Co. and Memphis Natural Gas Co.

MEMPHIS NATURAL GAS SALES

Memphis Natural Gas Co. December sales were 1,100,533,500 feet, a gain of 217,486,100 feet or more than 24 per cent over December, 1929. Sales for the year were 9,148,245,400 feet.


WHEN YOU BUY AN EMCO
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Oil Industry Equipment and Supplies

IDECO UNIT FOR WELLS UP TO 3,000 FEET DEEP

The Ideco Type A-3 pumping unit designed for use with gas or electric drive is a complete, self-contained, pumping unit designed for use on wells up to 3,000 feet in depth. It consists of a double reduction gear unit with double

helical (herringbone type) continuous tooth gears, driven by a motor or single or mulitcylinder gas engine through V belt or silent chain drive; a crankshaft with twin 42-inch cranks, one on either side of the gear housing, and Ideco crank counterbalance for each crank; a double pitman; heavy-duty roller pitman bearings; an A frame samson post; a solid I beam type walking beam; and a mule head for straight lift pumping. All driving gears are completely enclosed and operate continuously in a bath of oil.

The entire assembly is mounted as a unit upon a structural steel bed plate, and is built for installation upon the derrick floor or for mounting upon a concrete foundation. The unit is complete in itself and with exception of the motor or engine requires no additional equipment. Further information may be obtained from the International Derrick & Equipment Co., Columbus, Ohio.

CONSERVATION VENT VALVES

The Vapor Recovery Systems Co. of Compton, Calif., has announced a new conservation vent valve for oil tanks. Frank V. Long, president, says the new "Varec" breather valve is made of pure aluminum throughout and is an addition to the company's present line, but incorporating the features which have given the Toncan iron valve its high flow capacity. It eliminates wind-drift by utilizing a single passageway common to both vacuum and pressure relief. Being made of pure aluminum, it can be installed on tanks containing oil which gives off corrosive gases, such as West Texas crudes, cracking plant run down tanks, caustic tanks, etc. Pure aluminum seats are installed in such a way as to permit easy replacement, and, if desired, seats may be of lead, stainless steel or any other metal. These all-aluminum valves are light in weight and thus are easily handled and installed. The streamline design of the valve body and static balanced valves results, Mr. Long says, in a flow capacity of 98 per cent of an open nipple and cannot chatter.

NOTES ABOUT TRADE LITERATURE

The American Cast Iron Pipe Co., Birmingham, Ala., is mailing a new catalog on its square flanged simplex cast-iron condenser piping.

"A Practical Test for Viscosity" is the title of an illustrated booklet issued by the Visco-Meter Corp., 315 Grote Street, Buffalo, N. Y.

Two new bulletins have been issued by the Sullivan Machinery Co., 400 North Michigan Avenue, Chicago, one describing "Buster" concrete breakers and the other describing drifter rock drills.

A folder, D.M.F. 5,299, covering briefly the use of steam jet air ejectors in industries using vacuum processes has been issued by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

Two attractive booklets issued by the Caterpillar Tractor Co., Peoria, Ill., are "Pipe Lines" and "Public Utilities," each describing and illustrating the usefulness of the Caterpillar in these fields.

"The Heart of the Engine the Seat of Power" is the title of a bulletin published by A. Allan & Son, Harrison, N. J., manufacturers of Allan red metal and bearing bronze.

OILITE HAS HIGH OIL CONTENT

Self-oiling bearing material that will eliminate squeaks and excessive wear and minimize friction is said to have been found by Chrysler motors engineers. It has been christened "Oilite." "Oilite" is an alloy of copper, tin and other metals, subjected to tremendous pressure, heat-treated and then impregnated with hot oil in a vacuum. It absorbs up to 40 per cent of oil by volume. Its high oil content may be proved by any one of numerous tests. If squeezed in a vise, it drips oil. If subjected to a slight pressure when filled with water, oil is forced out. Even so slight a rise in temperature as occurs when it is left to stand in the sun will cause oil to seep out. Owing to its high oil content, a hydraulic cushion exists that permits unusual bearing loads. "Oilite" is handled commercially by the Amplex Manufacturing Co., 7900 Joseph Campau Avenue, Detroit, Mich., a division of the Chrysler Corp.

WASON SUCCEEDS MOORE

R. R. Wason has been elected president of Manning, Maxwell & Moore, Inc., succeeding C. A. Moore who becomes chairman of the board of directors. Mr. Wason also was elected president of the Consolidated Ashcroft Hancock Co., Inc., one of the largest subsidiaries of Manning, Maxwell & Moore, Inc. It manufactures Ashcroft gauges. Hancock valves and American instruments with plants in Bridgeport, Conn., and Boston, Mass. Mr. Wason's entire background has had to do with merchandising and management problems. His headquarters will be in the main office of Manning, Maxwell & Moore, Inc., in New York. Other plants owned by Manning, Maxwell & Moore, Inc., are the Putnam Machine Works, Fitchburg, Mass., where heavy machine tools have been manufactured for over 93 years, and the Shaw Crane Works, Muskegon, Mich., founded in 1891, where Shaw overhead electric traveling cranes are built.

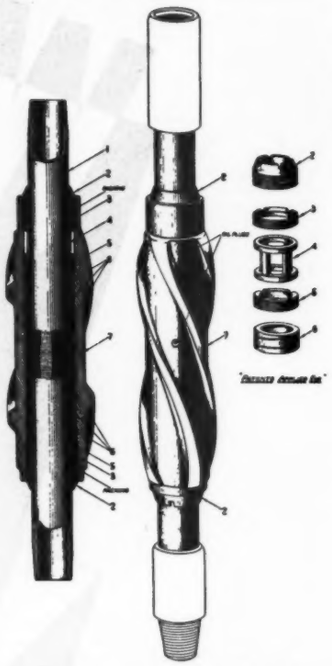
FLUID PACKED PUMP CO. NOW OCCUPYING ITS NEW HOME

This is the home of the Fluid Packed Pump Co., 2 S. W. Twenty-ninth Street, Oklahoma City. In addition to handling the fluid packed pump a complete line of Shaffer products, including Shaffer adjustable flow beans and Shaffer control gate is carried in the warehouse stock, together with spare parts. The Olinda casing and tubing head, a Shaffer product, is carried.

The office, occupying the lower floor, consists of two large rooms. One is occupied by R. C. Grinnell, president of the company, and the other by the clerical force, with a compartment for John Moran, sales manager. The upper floor is devoted to living rooms, one occupied by the pilot for the company's airship. The warehouse at the rear is designed to take care of an ample stock of all equipment handled by the company. A loading platform runs the full length of that building.

DEVICE IS DESIGNED TO KEEP THE BIT STRAIGHT

The Crowell rotary-bit guide, put on the market by the F. M. Crowell Co., Inc., Tulsa, is designed to keep the bit straight while drilling in sloping formations. When core drilling sandy formations the extra weight applied forces the core in the core barrel before there is time for the circulation to wash it away.



1—Eight-foot section, steel seamless pipe, ¼" wall thickness. 2—Packing-retaining ring and lock-nut. 3—Lower half of stuffing box ring. 4—Oil reservoir and spacing ring. 5—Jam nut, to hold bearings in place. 6—Grooved bronze bearings. 7—Spiral guide housing.

The guide has ample clearance for the passage of cuttings and circulation between the vanes. According to the manufacturers it will keep the hole straight from the beginning and will sidetrack a crooked hole at the point of curvature. The housing (No. 7 in the illustration) does not rotate with the drill pipe, but follows the bit, holding it in a vertical position.

The drill pipe rotates inside the housing in a bath of oil on full floating bronze bearings that are lubricated automatically. The stuffing box is packed with oil- and water-resisting packing. The body is self-cleaning and the manufacturers say it will not ball up in the various formations encountered.

FEDERAL ANNOUNCES TRUCK

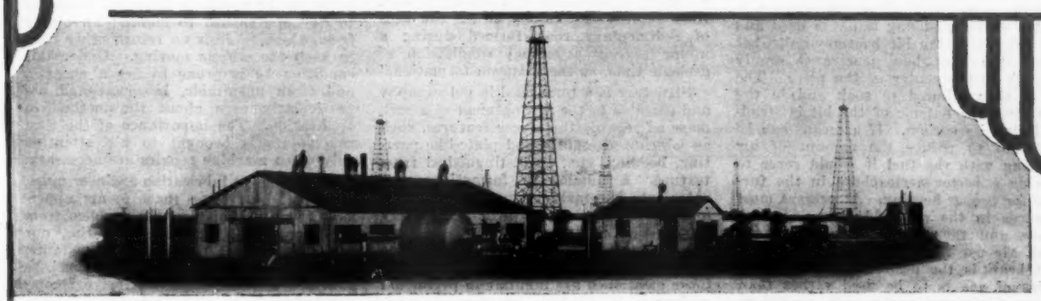
Greater pay-load capacity at lower operating expense is said to have been achieved by the Federal Motor Truck Co. in its new six-wheel, six-brake truck. The Federal features in this six-wheel model improved riding comfort and road-cushioning qualities made possible by a flexible construction which allows either axle assembly, the individual wheels on either side, or both wheels on either side to move up and down independently. The rear wheels are mounted on two pairs of rear springs (one pair on each side) and the design provides a proper weight distribution on all six wheels.

OFF" 2000 POUNDS
SEMER TYPE - 10's

ALERT engineering has solved the gas lift problem on this Oklahoma lease. Special, all-steel compressor cylinders enable the T. B. Slick plant to kick off 6400-foot wells at pressures ranging from 800 to 2000 pounds. The kick-off unit is a 200 B.H.P. Type-10 equipped with special 2000-pound steel cylinders (5-½ x 5-½ x 20"). The three flowing units are 200 B.H P., Type-10's with regular 1000-pound cylinders (14-¼ x 6-¾ x 20").

This high-pressure installation demonstrates the ability of Cooper-Bessemer engineers to furnish a satisfactory answer to new and difficult problems of compression. In every important oil field in the world, Cooper-Bessemer Type-10's are giving the satisfaction that always comes from units that are *right* for the work they must do.

THE COOPER-BESSEMER CORPORATION
MOUNT VERNON, OHIO GROVE CITY, PENNSYLVANIA



T. B. Slick gas lift plant, Hoopes lease, Oklahoma City field, flowing 2 to 3 wells at 6400 feet. (Large photo shows high pressure cylinders.)

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

MISSISSIPPI OIL PROSPECTS

Has Mississippi either oil or gas wells that are producing in commercial volume? Can you tell me about how many wells there are in the State, in what part of the State they are located and about what their total production (oil and gas) is? Is the State regarded as a potential producer of major importance?—S. R. L.

The state laws of Mississippi do not require drillers to file a record of their operations with the State Geological Survey, with the result that it is not possible to answer your question with exactness. No live oil has been produced in Mississippi, but indications point to the likelihood of oil being found in commercial quantities with further prospecting. There is no basis at this time for saying that the State is a potential producer of major importance.

The following information in reply to your inquiry is obtained from Dr. E. N. Lowe, state geologist of Mississippi:

"There are approximately 45 wells now drilling and recently completed in Mississippi. Most of these are in the area within a few miles of Jackson, about a dozen being scattered over other parts of the State.

"Thirteen have been brought in as gassers since February 1, 1930, all within the Jackson area, their production aggregating about 250,000,000 feet per day. The gas is encountered in a porous white chalk of lower Midway or upper Cretaceous age, at depths of approximately 2,450 feet. With precautions, this gas flows free of salt water.

"Although no live oil has been produced by any of these wells, the presence of heavy hydrocarbons in the gas suggests the probability of oil occurrence in territory adjacent to the gas field. Wherever the subsurface formations—especially the basal Tertiary or Cretaceous—show adequate foldings within 25 or 30 miles of the center of the gas field, prospecting would be justified."

TOOL DRESSER WANTS TO KNOW

My job is tool dressing. I suppose I am as good as the average man at the work in this field. Anyway I seem to get as good results as any of them. But I don't like to do things without knowing why they have to be done. Like other tool dressers, I try not to overheat the bits, knowing that it is likely to make them soft. Just why does it make them soft? If you will explain this to me I will be much obliged. I suppose you will get a quiet laugh out of this question, coming from a tool dresser—I. G. L.

Your supposition as to the quiet laugh is ill founded. More intelligent work would be done in the oil field and elsewhere if workers would ask questions and find out, instead of looking wise and remaining ignorant.

An answer to your question is provided by Francis B. Foley, metallurgist for the Lucey Manufacturing Co., in Jeffery's "Deep Well Drilling." Mr. Foley says:

"Steel contains carbon and so does coal. If you blow air on coal when it is hot the carbon disappears and only ashes remain. The carbon goes up in blaze and smoke. If you blow air on hot steel the carbon disappears, just as it does from the coal, leaving behind only iron, and some of the iron will probably have changed to scale (iron oxide). This loss of carbon is called decarburization, the scaling is called oxidation. It is necessary to have a certain amount of carbon in steel before it will harden sufficiently to be useful as a drilling tool. The manufacturer makes his bit of steel which he thinks has the right carbon content. If the steel is heated quite hot in the usual type of oil field furnace and allowed to soak there any length of time the carbon will disappear from the outside and leave a coating which cannot be hardened. The higher the temperature the more quickly and completely is the carbon removed. It is quite hopeless to attempt to get the ordinary oil field furnace operating so that the steel will not decarburize if it is given the temperature and the time. The best that can be done is to run the temperature as low as the hammer will stand and only allow the piece to remain in it long enough to be sure it is heated through. Be guided by the temperature at which the steel will finish. Fortunately, with fishtail bits, by the operation of cutting off an inch or two from the edge of the bit to make it sharp and give it the proper shape, the portion of the steel heated hottest, and because of its thinness finished usually quite too cold, is removed, so that fresh steel is present, as a rule, for the hardening operation. That is not true of cable tool bits.

"With large cable tools the danger of overheating and of decarburizing is as great, if not greater than in heating fishtail bits. There is a greater mass to be heated and therefore the heating would normally be slower, but there is a tendency to gain time and heat the bit as rapidly as possible. The consequence is that a sharp oxidizing flame is used and the outside of the bit becomes quite hot before the heat has penetrated evenly through to the center of the piece. The bit is then allowed to soak and in the meantime the outside of the bit is steadily losing its carbon. If a means can be contrived to reduce the amount of air entering with the fuel it would serve to provide a better atmosphere in the furnace for proper heating. At present most furnaces in the oil fields have no such means and there is nearly always too much air used. What is often called a 'soft heat' is the desired condition. An excess of gas is to be used rather than excess of air and under such conditions the loss of carbon is reduced to a minimum.

"These precautions (against overheating and decarburizing) should be particularly observed in cable tool dressing because more often than not there is no cutting off of metal from the end of the tool as there is in the dressing of rotary bits. Many soft edges on cable tool bits may be traced to the loss of carbon from the end of the tool during heating, and often a bit dresser has to cut a piece off the end because he finds he is unable to obtain a hard cutting edge. Usually he thinks this is necessary because he has burnt his steel, but it is apparent from what has been said that this may not always be the fault. A very thin layer of soft iron which results from a slight amount of decarburization will probably not do any harm because it wears away rapidly and exposes the harder metal underneath. As the layer becomes thicker the bad effects of it become more apparent. The edge dulls very rapidly and drilling is retarded. It is far better to take precautions against the loss of carbon, remembering that it is caused by two things, high temperatures and too much air entering on the hot steel. It will pay to watch both of these conditions."

WHY WAS IT CALLED THAT?

AGITATOR

Whether the word "agitator" is applied to somebody who creates political disturbance or to a device used in the oil refinery, it means about the same thing, for the agitator always is an agent that stirs up, shakes, excites. In the removal of sulphurous and asphaltic bodies from crude petroleum sulphuric acid is used and to perform its work efficaciously the acid must be mixed thoroughly with the oil. The device employed thus to bring the two substances into intimate contact was called an agitator for the obvious reason that its function was to stir or agitate.

STRUCTURE AND FORMATION

I am just beginning to get interested in petroleum geology. In the articles in your magazine the writers often refer to formations and to structures. They do not seem to be the same thing, but I do not understand just what the difference is. Will you tell me, please?—T. O. G.

There terms are defined in the International Dictionary as follows: "Formation, an aggregate of mineral deposits or rock masses designated with reference to their origin or composition. Beds of sedimentary rock formed by uninterrupted depositions and having in any given place a similar composition and similar fossils. Also applied indefinitely to all the beds of sedimentary rock formed during a minor (rarely a major) subdivision of geologic time, as the Simpson formation."

Structure is a term used in petrography and pertains to the arrangement of a rock mass as regards the larger features, such as jointing, columnar and plate-like parting, bedding, etc., as distinguished from texture. A number of formations may enter into the making up of a structure and the structure may be one of many types, such as dome, anticline, syncline, terrace, nose, lenticular, etc. There are other types of geological structures, but those mentioned are familiar in petroleum geology.

BENEFITS FROM REPRESSURING

I am interested in the Callahan County district in Texas, where I understand some of the operators have been trying the repressuring method of production. Can you tell me what success was met? Was production increased, and if so to what extent? Has repressuring had any effect on the gravity of the oil?—N.E.N.

The effects of repressuring in Callahan County so far as it relates to the Williams Pool is told in an engineering report of the United States Bureau of Mines, which shows that production was increased greatly. The Williams Pool, with 61 producing wells and 9 input pressure wells, showed under repressuring methods an estimated gain of 33 per cent in production over what had been expected from normal production methods in 1927, 78 per cent in 1928, and 76 per cent in 1929. The initial production of wells in this pool ranged from less than 4 to 35 bbls., with a daily average of 12 bbls. The estimated net increase for the field over a 3½-year period was 57,500 bbls., or 44 per cent.

The Williams Pool is one of several shallow pools in the lenticular sands of the Cisco series in the Putnam-Moran district. The outstanding features of the pool are the abrupt variation in sand conditions, the absence of pronounced edge water encroachment, the irregular oil-water contact, and the "low-head" and "small volume" water that occurs apparently in the base of the sand in the "lows" of areas of depression.

The gravity of the oil in the William Pool was lower from the beginning of production than that of oil from wells in the surrounding pools. The use of air in this pool lowered the gravity from 33.3° to 31.8° A.P.I. during approximately 18 months.

ABOUT LUBRICATION ENGINEER

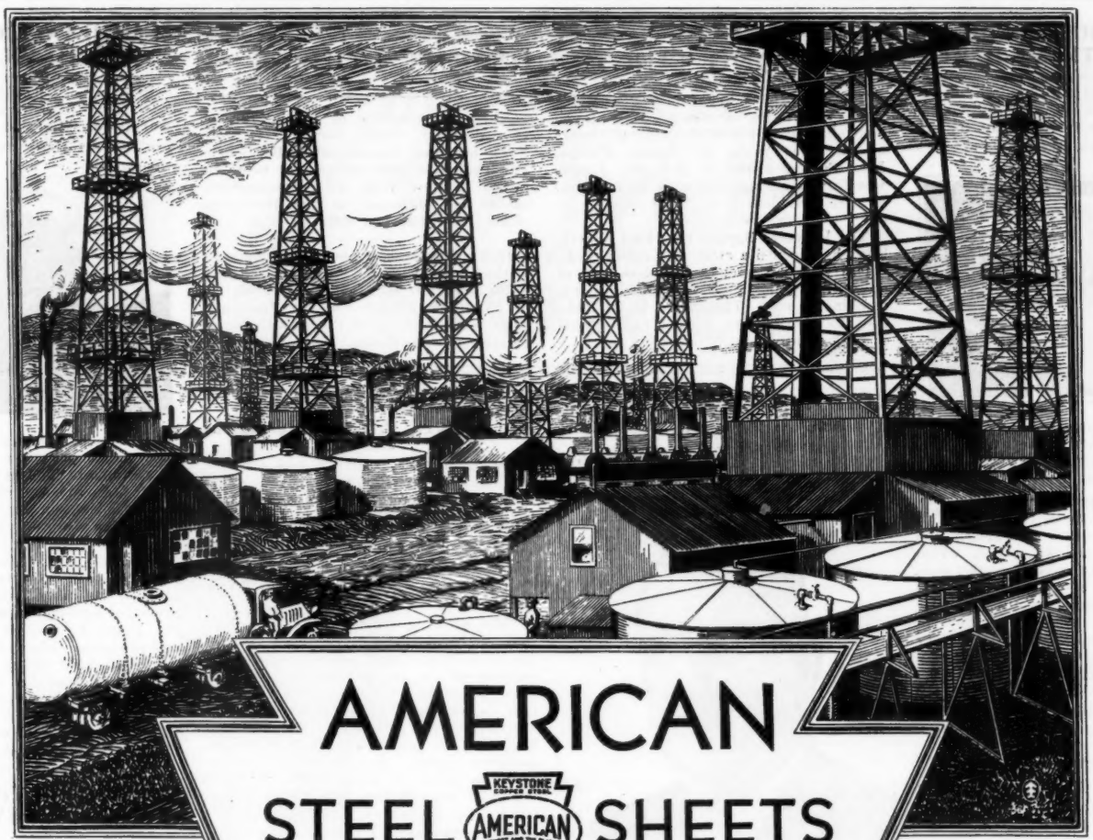
The following letter concerning the work of a lubrication engineer comes from George J. Komarsh, of S. F. Bowser & Co., Fort Wayne, Ind.:

"I was greatly interested in reading K. A. Newman's outline of the responsibilities of a lubrication engineer as published in reply to the question of A.T.S., page 88, November 20 issue of The Oil and Gas Journal.

"Mr. Newman's concept undoubtedly was expressed in sufficient detail to answer the question. It seems, however, to approach the question from only one angle. The consumer carries three points in his mind, viz, (1) correct type of lubrication for existing conditions, (2) proper method of application, and (3) adequate means of reclamation.

"Of the three the consumer is, perhaps humanly, most interested in the last as it represents something tangible to him. Without reclamation, lubrication is carried in the consumer's mind as an expense, to be regularly incurred from day to day and month to month; an outlay from which there is no return other than to keep the wheels moving. Under this condition he is prone to use a cheaper, and often unsuitable, lubricant and not particularly care about the method of application. The importance of the first two points is brought to his attention only when machine repairs are necessary.

"The efficient lubrication engineer must, therefore, bear these three points uppermost in mind and view the problem from every angle. He cannot generalize, nor can he work with very definite constants. Every problem is individual and must be analyzed as such, with conclusive recommendations."



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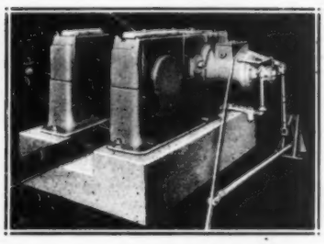
Oil Industry Equipment and Supplies

SPEED REDUCER MADE FOR EXTREME DEPTHS

Type GRF speed reducer, built by the Cooper-Bessemer Corp., Mount Vernon, Ohio, has a faster reverse than forward speed in any desired ratio up to 2 to 1.



This new unit transmits 60 horsepower at 250 r.p.m. and 120 horsepower at 500 r.p.m. Its application is for bandwheel or rig-front work on deep wells.

The following special points were developed by its designers to qualify this unit for extreme depths, high speeds and heavy loads: Flexible coupling, which prevents transfer of vibrations between engine and clutch; oil-flooded mechanism to insure smooth engagement; automatic adjusting facings; positive position in neutral, forward or reverse; high safety factor made possible by use of heavy-duty roller chains, and Timken roller bearings on main and pulley shafts. Details of the Type GRF are available from the company.

OIL CENTER TOOL CO. HAS NEW TUBING HEAD

The Oil Center Tool Co., Inc., Houston, Tex., has announced the development and production of the O-C-T combination tubing head, tested to 3,000 pounds, for use on flowing or pumping wells. The design of the head is simple and substantial, with ample provision for tight, leakproof joints. The top of the head is constructed so as to allow swiveling of a complete christmas tree, permitting all threads to be made up tight and flow lines to be run in any desired position. When tubing is pulled, it is only necessary to remove the bolts from the swivel flange and lift off the christmas tree. It is not necessary to disconnect a single thread.

The joint of the swivel flange incorporates the same sealing principle as that in O-C-T "Double Seal" forged steel flange unions. A soft steel ring tapered on each edge fits into grooves tapered to correspond. This gives two independent seats, and two seals. Either seal will hold the full pressure for which the head is designed. O-C-T combination tubing heads are furnished for 6⅝-inch O.D., and 7-inch O.D., closing with either 3-inch or 4-inch top connection.

FOR SERVICE STATION USE

A new cash machine especially designed for service stations and garages is announced by the Burroughs Adding Machine Co., Detroit, Mich. This machine is designed to register both cash and charge sales of gas, oil, tires and tubes, accessories, repairs, and other items, and to receive payments on account and to issue credits or paid-out items. It has a registering capacity of $999.99, registers number of gallons of gasoline sold, up to a total of 999, quarts of oil sold, and shows the number of the attendant handling each transaction. The new machine marks a departure in design for cash registering equipment, the outstanding feature being the adoption of the full type of keyboard.

AMONG THE EQUIPMENT HOUSES

H. W. Foulds, assistant to the president, has been placed in general charge of all sales work, by Goulds Pumps, Inc., Seneca Falls, N. Y. Mr. Foulds was formerly connected with Servel, Inc., as vice president.

The Hercules Supply Co., Fort Worth, Tex., has opened a store in Kilgore, Tex., where it is carrying a complete line of oil well supplies, including pipe, casing, machinery, etc. This store is in addition to the one in Van, Tex., opened several months ago.

The eastern office of Byron Jackson Co., Berkeley, Calif., formerly in New York, has been transferred to Bethlehem, Pa. Though a sales office will be maintained in New York, all correspondence should be addressed to the Bethlehem office, Postoffice box 409.

Howard Butt has been made manager of the engineering and export department office, 50 Church Street, New York, for the William Powell Co. of Cincinnati, Ohio, manufacturer of Powell valves and engineering specialties.

KURTH IS SUCCEEDED BY TROUT AS LUFKIN HEAD

At a meeting of stockholders of the Lufkin Foundry & Machine Co., Lufkin, Tex., W. C. Trout, vice president and

W. C. Trout

general manager, was elected president and J. H. Kurth, Jr., vice president.

Mr. Trout, under whose management the company has grown from a small jobbing shop to one of the largest plants in the Southwest, succeeds the late J. H. Kurth as president.

Mr. Kurth, Jr., lumberman, financier and director of numerous banks and other institutions of Texas and Louisiana, has spent the last 10 years actively in charge as president of the Vernon-Parish Lumber Co. of Kurthwood, La.

NEW G. E. REVERSING MOTOR

The General Electric Co. announces a new line of single-phase, repulsion induction motors, designated as Type SCA, capable of frequent reversal. These motors have the same appearance as the General Electric Type SCR general purpose, single-phase motors, and are mechanically interchangeable in all respects with corresponding horsepower and speed ratings of that type. Available ratings range from three-fourths to five horsepower at 1,800 r.p.m., and from one-half to two horsepower at 1,200 r.p.m. All mechanical modifications which may be applied to the general purpose SCR motors are equally applicable to the new Type SCA. The starting torque is high and ranges from 225 to 275 per cent of normal full-load running torque depending on the rating. Control for the new motor is simple, consisting only of a full voltage, three-pole, reversing switch which may be either manual or magnetic.

SEES GROWING USE OF NICKEL AND CHROMIUM

Owing to their stability and strength at high operating temperatures, steels of high nickel and chromium content have found an important place in the petroleum industry, according to a review of the nickel industry by A. J. Wadhams, manager of development and research for the International Nickel Co., New York.

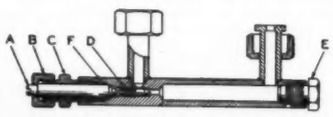
"The growing demand for these alloys in 1930 considerably outstripped that of the peak year, 1929, despite substantial curtailment in the production of petroleum products," the review says. "Further expansion of nickel tonnage may be expected in the petroleum field, which is beginning to accept, in addition to the stainless steels, certain nickel-bearing cast-iron alloys of good corrosion-resisting qualities, and also pure nickel strainers for the bottom of the deep wells."

A more generalized review of the nickel industry says:

"Realizing that times of depression offer exceptional opportunity for the introduction of new materials, the year was used for active technical and commercial development, and effort and expenditure were increased over those of any previous year. Large additions were made to productive capacity, and the International Nickel Co. now is prepared to produce 180,000,000 pounds of nickel in all forms. The nickel industry looks forward to 1931 with confidence."

DAMPING U-TUBE CAN BE ADJUSTED WITHOUT STOP

A new damping U-tube has been perfected by the Foxboro Co., Foxboro, Mass., for use on all the new style flow meters and flow controllers. This U-tube can be adjusted for proper damping while the instrument is in operation. There



is no need of shutting the pressure off or taking the instrument apart to make this adjustment.

In the illustration A is a "screw driver" fitted to the end of needle valve D. By turning A, adjustments can be made in the damping without the mercury being forced out. These adjustments can be made very minute or very large as conditions warrant.

The new damping U-tube is not furnished as standard equipment but must be specified when ordering a new flow meter or flow controller. It may be ordered for installation on all Foxboro flow meters or flow controllers now in the field except types T, C, A and B.

SEMIMETALLIC PACKING SAID TO SOLVE PROBLEM

Engineers in a wide variety of industries have been testing a new Johns-Manville packing, known as J-M No. 350 semimetallic. This packing is plaited up

square from a combination of asbestos fiber and nonabrasive metal. The whole is thoroughly lubricated and graphited. Johns-Manville say that in placing this new product on the market they are offering a solution to vexing packing problems.

J-M No. 350 semimetallic is designed for use against steam, air, water, oil, etc., on centrifugal rods at high or low pressures and at temperatures up to 500° F. It can be used in reciprocating rods and plungers, either alone or in combination with other rod packings.

The new packing is available in coil and ring form in sizes one-quarter inch and up. A modified packing, No. 351 semimetallic, is designed for use against gasoline and other cold mineral oils.

SULLIVAN INTRODUCING SEVERAL NEW MACHINES

The Sullivan Machinery Co., 400 North Michigan Avenue, Chicago, has brought out two new improved concrete breakers, described as "K-5" 72-pound, 25¼ inches long overall, and "K-6" 80-pound, 28½ inches long overall.

The "K-5" buster is intended for all ordinary work, while for unusually heavy conditions such as smashing the hardest steel reinforced concrete, the "K-6" with striking block or anvil construction, is available. In these tools, emphasis has been laid on simplicity, rugged construction, cutting power, and ease of handling. A new feature is the design of the front head and steel retainer. This retainer, of the cam type without springs or trunnion, enables the steel to be locked easily by hand or foot pressure, holding it rigidly in position, but permitting quick and easy release when desired.

The company also announces three new drifters for tunneling and mining work, also for heavy down hole drilling from tripods or quarry bars in channeling or line drilling. These machines include the "T-7" 3-inch cylinder, 122 pounds, for holes to 15 feet; "T-6" 3½-inch cylinder, 159 pounds, for holes to 20 feet; and "T-5" 4-inch cylinder, 190 pounds, for holes to 30 feet and up.

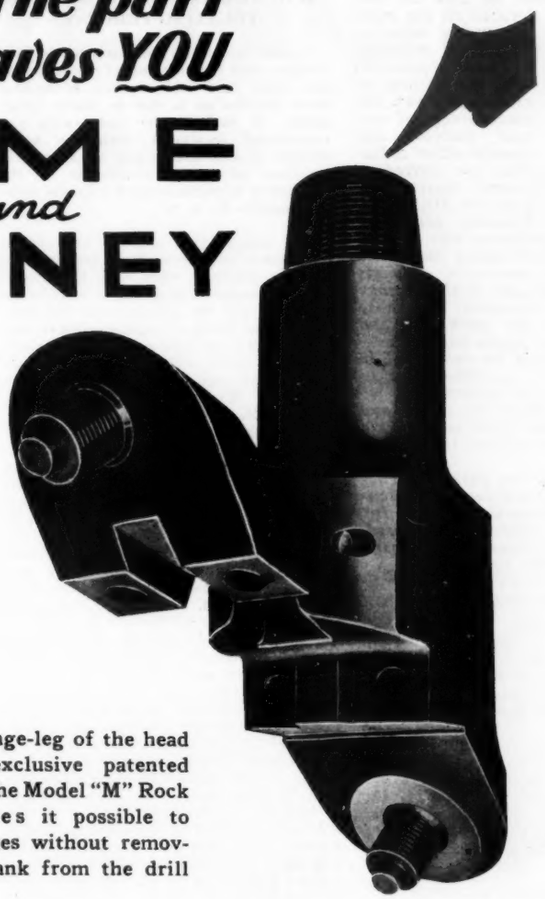
TRACKSON HAS MODERN PLANT

The new Trackson factory in Milwaukee, Wis., where Trackson tractor equipment is made, is said to be a model of industrial efficiency where every provision has been made for high-speed quantity production. The main unit is a one-story brick building which houses the heat treating department, machine shop, riveting, painting, assembling, inspection and shipping departments, a tool crib, and a storage room. The four outside walls consist almost entirely of glass windows, which, with the air of windows in the monitor type roofs, provide excellent lighting and ventilation.

here's the part that saves YOU

TIME *and* MONEY

Model "M" Rock Bit with Model "M" 3-Point Reamer



THE hinge-leg of the head —an exclusive patented feature of the Model "M" Rock Bit—makes it possible to change cones without removing the shank from the drill pipe.

Due to extreme simplicity and the fact that cones and bushings are not locked together, changing cones is a simple, easy ten minute job instead of requiring an hour or two of tedious effort.

These two exclusive and important features of the Model "M" Rock Bit eliminate the necessity of having two complete rock bits in the derrick, thereby minimizing your investment in drilling bits as well as saving considerable time and labor every time the cones are changed.

Other advanced features which have made the Model "M" Rock Bit the favorite of drillers and crews in all fields are illustrated and described in Bulletin No. 12-A. A copy will be sent you on request.

GLOBE OIL TOOLS CO.

LOS NIETOS, CALIFORNIA.

Successors to
H. C. Smith Manufacturing Co., Inc.
Wieman-Kammerer-Wright Co., Inc.
National Tool & Metals, Inc.

Branches:
Ventura, Calif. Bakersfield, Calif. Taft, Calif.
Hobbs, New Mexico Oklahoma City, Okla.
Kettleman Hills, Calif.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted as in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

QUALITY OF VENEZUELA CRUDE OIL

Can you give me some information showing the quality of the crude oil produced in Venezuela, especially the gasoline recovery? Are there any refineries there?—H. E. J.

The crude oil of Venezuela varies from approximately 14° to 37° A.P.I. gravity. However, the largest production is between 14° and 20° gravity, while the lightest oil is produced in comparatively small quantities. The gravities are shown in the table.

Gravities Venezuela Crude Oil

From—	Gravity A.P.I.
Mene Grande	17
La Rosa Ambrosio	
Upper	20
Lower	25
El Mene	27
La Paz	28
Concepcion	27
Tarra	24
Quinquire	14

The first important field to be developed in Venezuela was the Mene Grande, the oil being approximately 17 gravity and showing a topping yield of from 6 to 8 per cent gasoline. A Venezuelan oil imported into the United States gave a yield of 10 per cent gasoline on a refinery scale, according to the table following:

Refinery Yields

	Per cent
Gasoline 425 endpoint	10.0
Furnace oil 130° F. flash	9.0
Gas oil 27° A.P.I.	11.5
Fuel oil 13° A.P.I.	68.0
Loss	1.5

Oil of this grade would quite reasonably yield by a combination of topping and a modern cracking system 50 per cent marketable gasoline.

There are several large refineries located near the Venezuela oil field, some of them being on the islands close to the coast. The Dutch Shell plant on the Island of Curacao is the largest petroleum refinery in the world, having a reported capacity of 175,000 bbls. a day. The refinery at Aruba is controlled by the Standard Oil Co. of Indiana.

The Bureau of Foreign and Domestic Commerce, Trade Information Bull. 723, 1930, lists a Shell plant of 20,000 bbls. daily capacity at San Lorenzo, Lake Maracaibo. Several other, but smaller, refineries are mentioned as being located about Maracaibo.

ACID REACTION HYPOCHLORITE TREATING PROCESS

I note in one of your articles in connection with the treating of solvents that you state that acid reaction of residue after distillation is due to faulty treatment. If such is the case, could you recommend treatment with the hypochlorite process that would not show acid reactions after the distillation of the gasoline or naphtha treated with the hypo treatment?—L. S. S.

The success that may be attained in the removal of sulphur from gasoline and naphtha seems to vary with the hydrocarbon material, the quantity of chlorine available, and the alkalinity of the solution. Some forms of organic sulphur may be removed or reduced as to total sulphur, but some others will show no reduction in the total quantity of sulphur. It was shown by Wood, Ind. Eng. Chem. 16, 1,116, 1924, that treatment with 30 per cent hypochlorite solution, containing 5.25 per cent available chlorine, while changing the mercaptans to the disulphides and giving a product sweet to the doctor test, had actually removed no sulphur. Some sulphur in the form of hydrogen sulphide could be removed but there was no action on alkyl sulphides, free sulphur, disulphides, thiophene, sulphoxides and sulphones. Experiments by Birch and Norris, Journ. Chem. Soc., 127, 1,934, 1926, with hypochlorite solutions containing 8.4 per cent available chlorine but varying in alkaline strength, showed that the alkyl sulphides were oxidized to sulphuric acid. The mercaptans produced the disulphides in solutions of high alkalinity but the acids were formed when very small quantities, about 0.2 per cent, of the alkali were present in the solution.

The conclusion was reached, after further investigations, that large volumes of hypochlorite solutions, high in available chlorine but low in alkalinity, would reduce the sulphur in gasoline due to sulphides, disulphides and mercaptans. Smaller volumes of the solution when containing lower chlorine percentage and of high alkalinity tended to inhibit the action. Free sulphur and thiophene resisted attack. Hydrogen sulphide was decomposed to some extent.

Enough alkali should be carried in the solution to balance the oxidation products and to prevent chlorination. Preliminary washing with water and an alkaline solution is good practice as is also the application of a final alkaline wash.

The advisability of the use of the process must depend upon local conditions. The character of the sulphur compounds that may be removed by this kind of treatment has been indicated. The process is a chemical one and should be under the control of a competent chemist.

NICKEL AND IRON CATALYSTS

Combinations of iron and nickel have been mentioned as suitable catalysts for hydrogenating petroleum and I would like to know in what form they are used? Have you this information?—O. S. O.

There are numerous patents mentioning nickel and iron as catalysts for use in the hydrogenation of oil. A recent mention of several forms is to be found in four British Patents 335,215-335,218 inclusive. The description from these follows:

In the destructive hydrogenation of oils, etc., in the vapor phase, a catalyst is employed consisting of a coating of an alloy or metal on an alloy or metal base, such as iron or steel, in the massive form, example in the form of plates. The total pressure is not less than 10 atmospheres and may be 250 atmospheres, and the temperature is from 400° to 600° C., the amount of hydrogen employed being from 1,000 to 3,000 cubic meters per ton of oil. In an example employing nickel plated iron at a temperature of 470° C. and a pressure of 250 atmospheres, the total yield of petrol was 75 per cent of the middle oil treated.

Suitable alloys of tin are those with iron, copper, magnesium or phosphorus which have a melting point above 500° C. or the reaction temperature whichever is the higher. Examples are alloys of tin with iron containing 5 per cent of tin and melting at 968° C., or gun-metal containing 90 per cent of copper and 10 per cent of tin. Up to 80 per cent of tin may be used in alloy with iron; bronze and phosphor bronze may also be employed. The alloys may be supported on metals or alloys, such as iron or a steel containing 18 per cent of chromium, 8 per cent of nickel and 0.1 per cent of carbon.

In the destructive hydrogenation in the vapor phase of oils and similar material under a pressure of at least 10 atmospheres and at elevated temperatures, the catalyst employed consists of a combination of a massive metallic catalyst and a porous catalyst in bulk, that is, in pieces or layers of appreciable size or thickness. Preferably the massive catalyst is composed of at least two metals, example iron coated with tin or nickel, or of a metal, such as tin, and a metalloid such as arsenic, antimony, bismuth, selenium, tellurium or alloys containing tin. As porous catalyst, ferric oxide, bog iron ore, or ferric oxide containing 1 to 5 per cent of aluminum oxide may be employed, or a porous support such as pummice or magnesia, impregnated with the required oxide may be used as the porous catalyst. The oxide catalysts may be reduced in a current of hydrogen before use in the reaction. The two catalysts may be placed in separate vessels or in juxtaposition, for example by using the massive catalyst in the form of a perforated tray filled with pieces or pellets of the porous catalyst.

HYDROCARBONS AND CARBOHYDRATES FROM CARBON DIOXIDE

Your discussion, January 22, 1931, of the formation of hydrogen, carbon dioxide, methanol, and other products from methane, suggests that the reverse operation may be possible. Say carbon dioxide as a source of methane, alcohols, sugars, etc. Is there anything to this?—C. S.

Much attention is being directed by many investigators to possible methods for the preparation of synthetic products from natural gas, and especially from methane large quantities of which are available in the immense volume of natural gas now being produced without an adequate market. Carbon dioxide cannot be obtained so readily and at so low a price as natural gas. There is therefore not the favorable economic condition surrounding the use of the former as the latter as raw material for organic syntheses. However, it is possible, by purely hypothetical reasoning, to construct on the back of an envelope any compound of carbon, hydrogen, and oxygen from carbon dioxide, water, and air; but to actually cause some indicated reaction of this sort to proceed is not so easy.

Within the past few years considerable success has been attained in the building up of valuable and important substances by processes that, when first suggested, were considered simply as fancy ideas. The greatest of these accomplishments, and of far-reaching importance, is the extraction of nitrogen from the air and the conversion of it into ammonia and fertilizing material. With so much encouragement it does appear that it is no idle dream to look upon carbon dioxide as the foundation material for numerous substances of commercial importance.

The president of the Society of Chemical Industry, Dr. Herbert Levinstein, has referred to this subject in his address to the society, July, 1930. He mentions the process of producing synthetic ammonia as being similar, and that fuels and other materials might in the future be obtained from the carbon dioxide in the atmosphere and water. He said: "The complete reduction of carbon dioxide to methane, fully hydrogenated carbon, in other worlds to coal gas, has, in fact been accomplished. One volume of carbon dioxide and 4 volumes of hydrogen, from water, at a pressure of 150 atmospheres and a temperature of 280° C. (536° F.), passed over a reduced nickel catalyst gives a yield of methane of 95 per cent of theoretical. Is not this quantitative synthesis of coal gas, of methane from water and air, a discovery of great significance? Some day, perhaps soon, it may be developed into one of great industrial value."

Sugars and related substances have been obtained on a laboratory scale by the reduction of carbon dioxide in the presence of light and moisture under normal conditions of pressure and temperature. It is not far from the sugars to starches and cellulose.

DISTILLATE AND KEROSENE

What is the difference between distillate and kerosene? What are the specifications for distillate? Will distillate burn in an oil lamp for 24 hours without smoking? Can distillate be used in heaters where there is a wick involved? The distillate I refer to is the 38/40 distillate and the reason I want information on same is that there is a 2-cent tax on kerosene and I want to know when I have kerosene or distillate.—H. J. M.

The word distillate in its broadest sense may mean any product that is obtained from petroleum by distillation and it commonly means an unrefined product. Kerosene is the name of a specific product which has been separated from petroleum and then brought to recognized specifications by suitable purification methods. Frequently kerosene is called illuminating oil but all kerosenes are not suitable for burning in a wick-lamp; a particular grade being used as a fuel in tractors, for example. There are many grades of distillate but probably the largest quantity is now sold to be used for domestic fuel purposes. The United States Government has published the specifications for kerosene and these may be compared with similar properties for 38/40 burner distillate.

KEROSENE AND DISTILLATE COMPARED

	Kerosene	Distillate
Gravity A.P.I.	38/48	32/42 38.6
Color minimum	16	straw
Flashpoint closed	115°	155°
Sulphur not above	0.125	0.65
Flock test	negative	not required
Distillation, max. b.p.	625°	650°
Cloud point, none at	5°F.	not required
Burning test, shall burn freely and steadily for	16 hrs.	not required

The Government does not mention a gravity specification, but kerosene is sold in California of 38° and in the Pennsylvania district of 48° gravity. The tests of the distillate represent a sample. The important distinguishing property is that indicated by the burning test and we have had no experience with a commercial distillate which will meet the burning test specifications for kerosene.

The distillate you have mentioned would probably not prove satisfactory for use as an illuminating oil and would be objectionable, on account of smoke and odors, if used in a wick-feed heater.

EXPERIENCE!

* * *

Superintendents in the field realize that in the prevention of "hot spots" there is no effective substitute for Byers Genuine Wrought-Iron Pipe. Engineering experience fixes the places for wrought iron pipe in any "pipe prescription." "Pipe prescription" is specifying the right pipe for the right place. The per-

BYERS • GENUINE • WROUGHT-IRON PIPE

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formance record of unprotected wrought iron in line pipe and auxiliary services merits executive consideration of cost per year of operation. Our engineers are prepared to assist you in determining the places for Byers Pipe in a "pipe prescription" designed to solve your problems of soil corrosion. A. M. Byers Company, Pittsburgh, Pa. Established 1864.

AN INVESTMENT — NOT AN OUTLAY

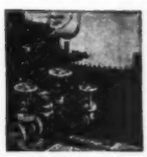
When you replace valves

FACE THE FACTS

It's the ultimate cost of the cure not the immediate price of the prescription in which you should be interested . . . Stainless Steel has proved its value in service.

In valve discs, rings, balls, bushings, seats, and stems, Stainless Steel has demonstrated a trouble-free life that is sometimes as much as 500% greater than that of ordinary steel . . . It is non-corrosive under steam and oil vapors . . . Highly resistant to the wear of sand and scale and to the cutting action of high velocity flows.

Stainless Steel is recommended for petroleum handling equipment because it provides physical and chemical properties not to be found in any other practical metal. It is available in Brinell 150 to 600 and tensile strength 60,000 to 250,000 pounds per square inch. Specify it for Valves, Bolts, Nuts, Tanks, Tubing, and Stills . . . Write for our booklet "Stainless in Industry."



Stainless Steel valves are economical not only because they outwear other types but also because they require very little service.

Stainless Steel is amazingly efficient under the combined forces of pressure, temperature and corrosion.

Genuine Stainless Steel is manufactured only under the *patents* of

AMERICAN STAINLESS STEEL COMPANY

Commonwealth Building, Pittsburgh, Pa.

STAINLESS STEEL

Stainless Steel equipment is easy to clean. In machinery its highly polished surface stays bright . . . In tube stills it cuts down the formation of coke.

LITTLE RIVER COUNTY

Roberts Oil Co.'s No. 1 H. J. Russell, 330 ft. E, 330 ft. S, NW cor., Sec. 25-12-29.....Location.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26.....S.D; W.O. 3,610 ft.

MADISON COUNTY

(Cable tools)

J. W. Baxter's No. 3 Hallin, C. Sec. 17-16-25.....T.A. 405 ft.
J. W. Baxter's No. 3 Hallin, NE SW, Sec. 1-17-26.....S.D. 50 ft.

MILLER COUNTY

Bullock Oil Co.'s No. 1 Hervey, SE NE, Sec. 33-14-26....D.S. stuck 2,720 ft; T.D. 2,818 ft.
East Texas O. & G. Co.'s No. 1 Harvey, 500 ft. E, 300 ft. S, NW cor., Sec. 2-15-26.....Set full string 4½-in. 2,957 ft; S. W. 2,961 ft.; arranging cors.
E. & F. Oil Co.'s No. 1 E. L. Beck, 200 ft. S, 200 ft. E, NW cor. SW, Sec. 36-15-26.....S.D. litigation; T.D. 2,968 ft.
Fitzwater et al's No. 1 Beck, 200 ft. N, 200 ft. W, SE cor. SW SE, Sec. 33-15-26.....Began drlg. Oct. 13; cmtd. 10-in. 93 ft.
Gusher Bend Oil Co.'s No. 1 Adams, 120 ft. S, 800 ft. W, NE cor. NW, Sec. 26-14-26.....Drlg. 1,925 ft.
Lenz et al's No. 2 Johnson, SE cor., Sec. 24-15-16.....Drlg. 4,500 ft.
Lenz et al's No. 3 Johnson, 250 ft. W, 150 ft. N, SE cor. NE NW, Sec. 24-15-26.....S.D. 2,850 ft.
J. D. McRae's No. 1 Smith, 150 ft. N, 150 ft. W, SE cor., Sec. 28-15-26.....Derrick.
Salzer & McRae's No. 1 Rose, SW cor. NE SW, Sec. 9-16-26.....S.D. fuel 475 ft.

OUACHITA COUNTY

Belmont et al's No. 1 Buck, SE cor. SE SW, Sec. 16-15-17.....S.D. 2,907 ft.
Copenhaven et al's No. 1 Elliott, Sec. 11-15-17.....D.S. stuck; T.D. 2,114 ft.

PIKE COUNTY

E. R. Henderson's No. 1 Tilyou, 660 ft. W, 500 ft. S, NE cor. NE SE, Sec. 26-8-14.....S.D. 2,110 ft.
E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24.....Derrick.

POPE COUNTY

Ark.-La. P. L. Co.'s No. 1 Baird, 760 ft. S, 660 ft. E, NW cor., Sec. 11-7-20.....Rig up.
Ark.-La. P. L. Co.'s No. 2 McFaddin, 685 ft. N, 485 ft. W, SE cor. NE SW, Sec. 15-9-21.....Drlg. hard sand 3,504 ft.

SCOTT COUNTY

Ark. Valley Gas Co.'s No. 1 Turner, C SE, Sec. 27-5-30..Location.
Heavener O. & G. Co.'s No. 1 Riser, Sec. 36-4-26.....S.D. 1,536 ft.
Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29.....Drlg. 1,315 ft.

UNION COUNTY

Chapman & Wilson's No. 1 A. H. Hadley, 330 ft. N, 330 ft. E, SW cor. NE SW, Sec. 3-18-13.....Drlg. 2,980 ft.
S. B. Hickman's No. 1 Hogg, 330 ft. S, 150 ft. E, NW cor. SE SE, Sec. 35-16-17.....Reaming to bottom; T.D. 3,070 ft.
Marine Oil Co.'s No. 2-B Thompson, 330 ft. N, 330 ft. E, SW cor. SE NE, Sec. 10-18-13.....Derrick.
Marine Oil Co.'s No. 1-F Winn, Sec. 10-18-13.....Hole full fluid 50% S.W; waiting on air; T.D. 3,604 ft.
Oil Field Corp.'s No. 1 Simmons, 330 ft. S, 330 ft. E, NWcor., Sec. 13-18-13.....D.S. test 3,556-3,602 ft; S.W; T.A. 3,602 ft.

VAN BUREN COUNTY

Glenn Kohle et al's No. 1 Scalan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-19-13.....S.D. 50 ft.

WASHINGTON COUNTY

(Cable tools)

Delbert & Graves' No. 1 Cunningham, Sec. 14-15-32.....S.D; W.O. 602 ft.
C. H. Willoughby's No. 1 Jones, Sec. 34-16-30.....S.D. 1,697 ft.
H. H. Taylor et al's No. 1 Runny, C NE SW, Sec. 1-13-29.S.D. 1,700 ft.

YELL COUNTY

(Cable tools)

Tegmeier & Luckett's No. 1 Falcon, Sec. 36-7-21.....S.D. 5,710 ft.

EAST TEXAS

BOWIE COUNTY

Maud-Redwater Oil Co.'s No. 1 Merritt, 175 ft. N, 175 ft. E, SE cor. G. W. Hardige 100-ac. tr. on Floyd Merritt tr. in Y. S. McKinney Sur. .....S.D. 632 ft.
Lee Timberlake et al's No. 2 Tidwell, 2,510 ft. N, 655 ft. W, SE cor. T. M. Rice Sur. .....S.D. 720 ft.

CAMP COUNTY

McDonald Bros.' No. 1 Tillery, 150 ft. E, 450 ft. S, NW cor. 127-ac. tr., in J. H. Murphy Sur. .....Cored sand 3,510-20 ft; drlg. 3,-600 ft.

CASS COUNTY

Wesley Morse et al's No. 1 Henderson, 800 ft. E, 1,100 ft. S, NW cor. C. E. Bailey Sur. .....Derrick.
Olds & Smith's No. 1 Atheny, 3,056 ft. W-E line, 856 ft. S-N line, J. C. Byers Sur. .....Drlg. 1,000 ft.
John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 56 ac. in K. E. Welborn Sur. .....Cored limey shale 2,270-75 ft; S.D.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. .....S.D. 360 ft.

HARRISON COUNTY

Corona Pet. Co.'s No. 1 A. J. Bohler, C, Bohler 140 ac. in SW cor. S. F. Sparks Sur. .....Derrick.
S. D. Hunter's No. 2 Dougherty, W. D. Burris Sur. .....Began drlg. Jan. 28; cmtd. 12-in. 245 ft; drlg. 1,350 ft.
Rowe-Nichols' No. 1 Pitts, E. A. Merchant Sur. .....Location.

MARION COUNTY

Geo. Hindman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. .....Began drlg. Jan. 28.
Hindeman & Rhondo's No. 1 McGaughey, 1,547 ft. W, most northerly SW cor., 1,638 ft. N, most northerly S line, W. J. Wills Sur. .....Rig up.
P. E. Hussey's No. 1 A. A. Trammell, Chas. Lockhart Sur .....Fishing 10 joints D.S.; T.D. 1,-884 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur. ....Drlg. 2,795 ft.
Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur. ....Swedging 3 joints collapsed 8-in; arranging to cmt. 6⅝-in. and packer 2,812 ft.

SHELBY COUNTY

Chapparell Oil Co.'s No. 2 Holt, Matthew Moore Sur. ....S.D. 2,107 ft.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 46)

RICHLAND PARISH

W. C. Feazel's No. 1 Simon, 2,406 ft. W, 2,020 ft. S, NE cor., Sec. 11-16-6 .....Cmtd. 6-in. 2,280 ft.
La. G. & F. Co.'s No. 1 Binion, 813 ft. E, 496 ft. N, SW cor. NW, Sec. 2-16-6 .....Drlg. 2,372 ft.
United (was Southern) Carbon Co.'s No. 2 Cooper, 660 ft. N, 2,551 ft. E, SW cor., Sec. 13-16-6 .....Location.
Southern Carbon Co.'s No. 7 F. B. and E. A. Sartor, 2,540 ft. S, 660 ft. E, NW cor., Sec. 17-16-7.....Drlg. 2,345 ft.
State Line O. & G. Co.'s No. 1 Noble-Morris, 917 ft. N, 339 ft. W, SE cor. SE SW, Sec. 35-16-5.....Drlg. 2,302 ft.
United Carbon Co.'s No. 1 Lindow, 1,980 ft. S, 37 ft. E, NW cor., Sec. 15-16-6 .....Rig up.
United Prod. Co.'s No. 1-A Wolf, 660 ft. S, 1,650 ft. E, NW cor. SW, Sec. 35-17-6 .....Began drlg. Jan. 28; cmtd. 12½-in. 158 ft; drlg. 500 ft.
United Prod. Co.'s No. 1-B Wolf, 1,980 ft. N C, Sec. 34-17-6 .....Began drlg. Jan. 27; cmtd. 12½-in. 175 ft; 9-in. 945 ft.

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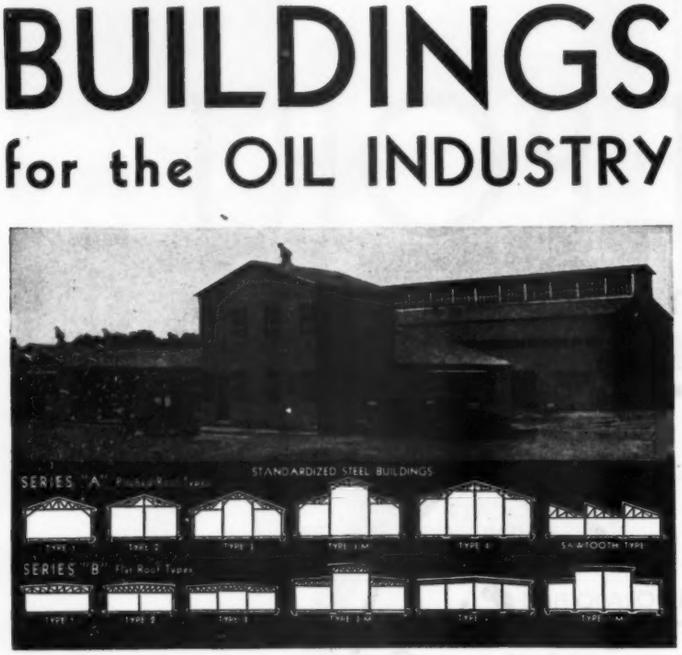

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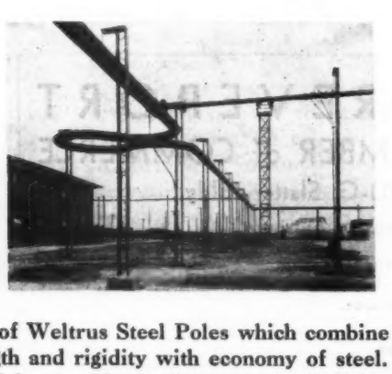

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SABINE PARISH—ZWOLLE

O. A. Gautier et al's No. 1 Mischell, 330 ft. E, 150 ft. N, SW cor. SE NW, Sec. 30-8-12 ..... Began drlg. Feb. 1; cmtd. 10-in. 100 ft; drlg. 500 ft.

R. L. Gay's No. 2-A Sabine Lbr. Co., 330 ft. N, 330 ft. E, SW cor. NE NW, Sec. 1-7-12 ..... Arranging test 2,750 ft.

F. M. Hood's No. 1-B Winston (was No. 2), 700 ft. E. 425 ft. S, NW cor., Sec. 31-8-12, Zwolle Townsite ..S.D. 1,065 ft.

Ab Jones et al's No. 1 Ferguson, 330 ft. N, 330 ft. W, SE cor. NE SW, Sec. 33-8-12 ..... Cmtd. 6-in. 2,380 ft.

Ohio Oil Co.'s No. 1 Brown, 330 ft. N, 330 ft. W, SE cor. SW SW, Sec. 35-8-12 ..... W.O.S.R; 2,000 ft. fluid; T.D. 2,535 ft.

Ohio Oil Co.'s No. 6 Bowman-Hicks, 300 ft. N, 265 ft. W, C, Sec. 2-7-12 ..... Cmtd. 6-in. 2,200 ft.

Pelican Nat. Gas Co.'s No. 8 La. Long Leaf Lbr. Co., 334 ft. N, 330 ft. E, SW cor. NW SW, Sec. 4-7-11 ..Cmtd. 6-in. 2,310 ft.

H. W. Perritt's No. 2 Bowman-Hicks, NW cor. SE NE, Sec. 2-7-12 ..... Cmtd. 6⅝-in. 2,202 ft.

H. W. Perritt's No. 3 Bowman-Hicks, 344 ft. S, 122 ft. E, NW cor, SE SW, Sec. 2-7-12 ..... S.D. 700 ft.

J. M. Tompkins' No. 1 M. R. Stoker, 300 ft. S, 100 ft. W, NE cor. SW, Sec. 10-7-11 ..... Drlg. 1,950 ft.

J. C. Walton's No. 1 Sabine Lbr. Co., 300 ft. S, 300 ft. W, NE cor. NW, Sec. 11-7-12 ..... Junked 1,310 ft; began second hole.

WEBSTER PARISH—SAREPTA

Cassidy & Davis' No. 1 Nickerson, 300 ft. S, 300 ft. W, NE cor. SW, Sec. 29-22-10 ..... Began drlg. Feb. 2; drlg. 150 ft.

ARKANSAS

OUACHITA COUNTY—SMACKOVER

L. H. Hamilton's No. 3 Doyle, 100 ft. E, 400 ft. N, SW cor. SE SE, Sec. 23-15-16 ..... T.A. 2,020 ft.

OUACHITA COUNTY—STEPHENS

J. D. Reynolds' No. 1 Grayson, Sec. 21-15-19 (Stephens townsite) ..... Rig up.

J. D. Reynolds' No. 1 Pace, Lot 28, Sec. 21-15-19 ..... W.O.S.R; 2,204 ft.

Wesson & Bonner's No. 1 Wesson, 500 ft. W, 175 ft. N, SE cor. SW NW, Sec. 22-15-19 ..... 300 ft. fluid; W.O.S.R; 2,169 ft. (reported 2,800 ft. in error).

UNION COUNTY—CHAMPAGNOLLE

Ohio Oil Co.'s No. 2 Raulston, 330 ft. S, 330 ft. E, NW cor. NW SE, Sec. 12-17-14 ..... Derrick.

Ohio Oil Co.'s No. 5 R. Pumphrey, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 12-17-14 ..... Began drlg. Jan. 26; cmtd. 10-in. 186 ft; drlg. 1,509 ft.

UNION COUNTY—EL DORADO

Rice Drlg. Co.'s No. 1 Watley, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 ..... S.D; repairing rig; T.D. 1,520 ft.

Southern Prod. Co.'s No. 1 Wingfield, NE cor. SE NW, Sec. 16-19-15 ..... S.D; title work; T.D. 215 ft.

EAST TEXAS

HARRISON COUNTY

Calatex O. & G. Co.'s No. 6 Argus, 755 ft. N, 699 ft. W, Mile Post 27, in J. Womack Sur. ..... Location.

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ..... Drlg. 1,750 ft.

Dillon & Bradham's (was W. G. Banks et al's) No. 1 C. O. Baldwin, 1,295 ft. W, 1,362 ft. S, NE cor. Baldwin 290 ac. in Hampton West Sur. ..... Drlg. sandy shale 850 ft.

S. E. Bell et al's No. 1 Burnett Lbr. Co., C, S. B. Hendricks Sur. ..... S.D; W.O. 3,086 ft.

Creighton & Hart's No. 1 Greeny-Kyle, C, Greeny-Kyle 60 ac., Jas. Tippett Sur. ..... Gas blowout 3,704 ft; S.D.

C. D. Neff et al's No. 6 Brumble, B. C. Jordan Sur. ....Derrick.

Knox et al's No. 1 Dunham, Chas. Haley Sur. ..... Reported S.W; abd. 2,888 ft; resumed Feb. 1; drlg. 3,008 ft.

Nat. Gas Prod. Co.'s No. 1 H. H. Alvord, 6,777 ft. S, 6,162 ft. E, NW cor., B. C. Jordan Sur. ..... Drlg. 4,319 ft.

MISSISSIPPI

HINDS COUNTY

Feazel O. & G. Co.'s No. 1 Garrett, SE cor. NW, Sec. 2-5-1e ..... Cmtd. 6⅝-in. 2,427 ft.

Cleve Love et al's No. 2 Ridgeway-McGhee, SE cor. NW, Sec. 2-5-1e ..... Rigging up.

Love Pet. Co.'s No. 1 Bob Taylor, 275 ft. S, 50 ft. E, NW cor. NE SW, Sec. 34-4-1e ..... Began drlg. Jan. 27; cmtd. 10-in. 775 ft; drlg. 2,020 ft; shale.

Miss. Pet. Co.'s No. 2 Baptist Orphanage, 210 ft. N, 210 ft. W, SE cor. NE SE, Sec. 28-6-1e ..... Drlg. shale 2,110 ft.

Pirtle & Flint's No. 1 Payne, 450 ft. W, 50 ft. N, SE cor. SW SW, Sec. 27-6-1e ..... Began drlg. Feb. 1; cmtd. 10-in. 750 ft.

RANKIN COUNTY

Miss. G. & F. Co.'s No. 1 Hanna, SW cor. SW NE, Sec. 14-5-1e ..... Derrick.

Pioneer O. & G. Co.'s No. 1 Ragland, NE cor. SW SW, Sec. 12-5-1e ..... Derrick.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 44)

NESS COUNTY

Gypsy Oil Co.'s No. 1 Coleman, C SW NE Sec. 25-17-25w ..Rigging up standard tools 3,860 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w ..... Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15 ....Shut down 1,050 ft.

PAWNEE COUNTY

Phillips' No. 1 Cuthbertson, NE cor. Sec. 27-20-18w ....Abandoned 4,175-4,267 ft.; water.

PRATT COUNTY

Wilcox O. & G. Co.'s No. 1 Bappin, SW NW Sec. 7-26-15w ..... Drlg. 4,795 ft.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Unknown, SW cor. Sec 3-2-35w ..... Shut down 2,005 ft.

RICE COUNTY

Cress et al's No. 1 Sharp, SE NE Sec. 13-20-10w ..... Rig.

Allison-Fitzwilliams' No. 1 Blake, NE NW Sec. 9-18-10w..Rig.

Gypsy Oil Co.'s No. 1 Koenig, SW NE Sec. 10-20-10w ... Drlg. 3,486 ft.

Muth Bros.' No. 1 Beyers, NE NW Sec. 21-19-9w ..... Sand 2,000-02 ft.; 3,000,000 ft. gas; shut down 3,085 ft.

ROOKS COUNTY

Empire Oil & Ref. Co.'s No. 1 Halsman, SW NE SE Sec 17-7-20w ..... Drlg. 1,335 ft.

RUSH COUNTY

Dewey & Mitchell's No. 1 Greenawalt, C SW Sec. 17-19-16w ..... T. D. 200 ft.

RUSSELL COUNTY

Agate Oil & Gas Co.'s No. 1 Rochfellow, SE cor. Sec. 6-13-12w ..... Show oil 3,042-44 ft.; bailed 18 bbls. 3 hrs.; now shut down.

Gilbreath et al's No. 1 Bratton, C NE Sec. 33-11-13w ....Drlg. 2,725 ft.

SEDGWICK COUNTY

Streeter & Stearns' No. 1 Tobin, SW SE NE Sec. 5-22-2 .Drlg. 2,730 ft.

Buck et al's No. 1 McNananan, NE NW NW Sec. 2-29-1..Rig.

SALINE COUNTY

Sampson et al's No. 1 Sudenderf, NE SE Sec. 30-14-2w ..Drlg. 2,790 ft.

Twin Mounds Oil Co.'s No. 1 Weis, C W half NE NW Sec 20-13-4w ..... Shut down 2,700 ft.

STEVENS COUNTY

McNabb and Mid-Kansas' No. 1 Rhinehart, C NE Sec. 23-32-39w ..... Drlg. 2,523 ft.; showing 4,000,000 ft. of gas.

WASHINGTON COUNTY

Sincox et al's No. 1 Penwell, NW SE NE Sec. 16-3-4 ..Shut down 1,720 ft.

WILDCAT OPERATIONS IN MISSISSIPPI

CLAY COUNTY

Company, farm and location—	Remarks—
Ohio Oil Co.'s No. 1 Cantrell, NE cor., Sec. 16-15-5	Rigging up with cable tools; T.D. 2,835 ft; hard lime.

COVINGTON COUNTY

United Prod. Co.'s (was S. P. Borden et al's) No. 1 McIntosh, 330 ft S, 330 ft. W, NE cor. SW NE, Sec. 8-8-16	S.D; W.O. 3,278 ft.
Miss. Gulf O. & G. Co.'s No. 1 Pope, 200 ft. N, 200 ft. W, SE cor. W½ NE, Sec. 35-8-16	S.D; W.O. 3,000 ft.

GRENADA COUNTY

Carter-Pace's No. 1 Dubard (was F. E. West et al's), NW NW, Sec. 18-22-4	Drlg. shale 1,710 ft.

HINDS COUNTY

Attkisson & Dyer's No. 1 Downing et al, SE NE, Sec. 27-6-1	Rigging up.
Cane River O. & G. Co.'s No. 1 Kabbles, NE cor. SW SW, Sec. 15-5-1e	Cmtd. cavity 3,270 ft; in red beds.
Gulf Ref. Co.'s No. 1 McLaurin, 1,230 ft. S, 1,410 ft. W, NE cor., Sec. 30-6-2e	S.D. 2,632 ft; chalk.
Gulf Ref. Co.'s No. 1 School, 660 ft. N, 660 ft. E, SW cor., Sec. 16-6-1e	Rig up.
Howard Oil Co.'s No. 1 Jackson College, C NW NW, Sec. 9-5-1e	Began drlg. Dec. 22; cmtd. 1 joint 12½-in.; S.D.
Miss. Pet. Co.'s No. 1 Solvent Inv. Co., NE cor. NE SW SW, Sec. 14-5-1w	T.A. 3,042 ft.
Tri-State O. & G. Co.'s No. 1 Wilson, 320 ft. E, 240 ft. N, SW cor. SE NE, Sec. 28-6-1e	Began drlg. Dec. 22; S.D. 20 ft.

JASPER COUNTY

Bay Springs Pet. Co.'s No. 1 Keys, C NW NE, Sec. 21-2-10	Began drlg. Dec. 16; cmtd. 15½-in. 104 ft; S.D.

LAFAYETTE COUNTY

Banks-Good et al's No. 1 May, 113½ rds. S, 26 rds. E, NW cor. SW, Sec. 32-10-1w	Derrick.

MADISON COUNTY

Central O. & G. Co.'s No. 1 Cameron, 200 ft. W, 200 ft. N, SE cor., Sec. 11-9-1e	Dry 1,533 ft; drlg.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19	W.O. 3,007 ft.
Amory Pet. Co.'s No. 1 Harris, SW cor. SE SE, Sec. 13-13-17	Began drlg. Jan. 28; cmtd. 12-in. 20 ft; 10-in. 478 ft.
Park Bowser et al's No. 1 Cowart, second hole, Sec. 2-12-19	Reaming to set 8¼-in. 1,180 ft; T.D. 1,262 ft.

NESHOBA COUNTY

Collins et al's No. 1 J. M. Carter, SE SE, Sec. 29-11-12	Drlg. shale 1,085 ft.

RANKIN COUNTY

Gansel et al's No. 1 Stallings, 280 ft. S, 280 ft. E, NW cor. NE NE, Sec. 25-5-1e	Coring red beds 3,020 ft.
R. A. Moore et al's No. 1 Interior Lbr. Co., Sec. 28-6-1e	S.D. 900 ft.
Cleve Love's No. 1 Muse, SE cor. SW SW, Sec. 32-7-4e	S.D; repairs 1,245 ft.
Millstein O. & G. Co.'s No. 1 Gammill-Hartsfield, 400 ft. E, 400 ft. N, SW cor. SW SE, Sec. 6-5-2e	200 ft. fluid; 50 ft. oil 2,503 ft; W.O.

WARREN COUNTY

Dixie Pet. Co.'s No. 1 Clark, 300 ft. E, 660 ft. S, NW cor., Sec. 31-17-5	Drlg. shale 1,525 ft.
Vicksburg Oil Co.'s No. 1 Dornbush, 2,080 ft. S, 1,520 ft. W, NE cor., Sec. 8-18-5	S.D. 1,600 ft.

WINSTON COUNTY

Miss. Drlg. Co.'s No. 1 Scarbrough, NW cor., Sec. 15-12-14	Drlg. shale 2,120 ft.

YALOBUSHA COUNTY

Collett- Carter Oil Co.'s No. 2 Blackmur, 990 ft. W, 285 ft. N, C, Sec. 14-11-4	Coring 2,410 ft.

OKLAHOMA FIELDS

(Continued from Page 41)

21-22-1, and same operators' No. 1, in the SE cor. NE, Section 21-22-1.

Test Block in Garfield

Another wildcat was announced during the week by the Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co. on a block of 4,500 acres held jointly. The test is No. 1 Heitholt, NW cor. SE SE Section 33-24-3w, in the eastern part of Garfield County. The test will be drilled to the Wilcox sand. It is being drilled near the Shell Petroleum Corp.'s No. 1 Reed, completed in 1925, which produced 15 bbls. of oil a day from the Simpson at 4,860 feet. The total depth was 4,871 feet in the Wilcox sand, where it found water. The well also found 7,500,000 feet of gas at 1,345 feet and several million feet of gas at 3,720 feet in the Layton sand, and a showing of oil in the Bartlesville sand at 4,453 feet.

The new test is being drilled on part of the acreage composed of the old Shell Petroleum Corp.'s block and has been core drilled. The Ramsey Petroleum Co. and Mid-Kansas Oil & Gas Co. secured the block when the Shell corporation released part of its acreage. It is believed geologists have reworked the structure and are of the opinion the area is part of the Nemaha Mountain chain, which extends north and south through Kansas and Oklahoma, on which large producing areas have been found in Kansas and northern Oklahoma.

Another wildcat test in Garfield County which is believed to be along the Nemaha Mountain chain is the Continental Oil Co.'s No. 1 Looman, NE cor. SE Section 9-20-4w, an old well being drilled deeper. The old total depth of the test was 5,735 feet, from which it was plugged back to 5,205 feet, where it is now drilling. The test has had a number of showings of oil and gas in the shallower horizons.

The third test in the county is J. V. Bailey and others' No. 1 White, SE cor. NW Section 9-24-6w, in the northern part of the county, and many express the opinion it is west of the Nemaha Mountain chain. It was drilling on the last report at 5,835 feet. The test was started in 1928 by Pulse & Beamer and was taken over by the present owners last year.

Champlin Refining Co.'s No. 1 Wansberg, NE cor. NW Section 36-23-4w, Garfield County, north of the Garber Field, swabbed 142 bbls. of oil from a total depth of 5,235 feet while cleaning out.

The first blocking of leases on a large scale in McCurtain County is in progress by J. C. Stewart. At the last public lease sale at the Five Civilized Tribes agency at Muskogee, February 3, J. C. Stewart bought 3,750 acres of leases. It is believed a block of 10,000 acres will be assembled. It is the first blocking of acreage in the southeastern part of the State in several years. The area is considered prospective gas territory.

Greater Seminole Production

The production from Greater Seminole area for the week ending February 2, averaged 177,378 bbls. a day from 2,861 wells. The first 12 pools listed below comprise the Seminole area, which averaged 117,002 bbls. a day from 1,870 wells:

Pool—	Wells	Bbls.
Little River	369	21,824
E. Little River	82	9,969
Carr City	78	13,056
Maud	133	2,424
Mission	93	4,268
Bowlegs	278	11,520
Earlsboro	283	14,181
S. Earlsboro	27	7,025
E. Earlsboro	158	13,796
Seminole	254	11,498
E. Seminole	33	1,803
Searight	82	5,638
Total	1,870	117,002
Allen	276	12,368
Asher	26	695
Wanette	54	7,980
Konawa	111	15,904
Sasakwa	50	3,962
St. Louis	474	19,467
Grand total	2,861	177,378

Greater Seminole Shipments

The pipe line shipments from the Greater Seminole area totaled 169,810 bbls. a day for the week ending February 2. The daily average shipments by companies were as follows:

Company—	Seminole Bbls.	St. Louis, Pearson, Asher Bbls.	Konawa Bbls.
Barnsdall	1,562	....	....
Champlin	2,910	....	500
Consolidated	....	2,562	....
Cosden	6,124	....	2,942
Deep Rock	2,125	510	....
Empire	6,671	....	....
Gulf	9,309	3,245	822
Magnolia	7,996	4,866	2,205
Oklahoma	23,067	223	192
Phillips	1,648	....	....
Prairie	3,903	2,002	709
Prod. & Ref.	1,953	....	....
Pure	7,416	....	....
Shell	2,228	245	1,207
Stanolind	23,396	7,331	4,140
Texas	8,148	5,430	2,015
Tidal	8,779	4,175	....
White Oak	1,562	....	....
Total	118,524	30,589	14,732
Tank cars	5,260	805	....
Grand total	123,784	31,394	....

Oklahoma City Shipments

The total shipments from the Oklahoma City Field for the week ending February 2, were 703,063 bbls., an increase of 16,494 bbls. a day from the previous week. The total shipments by companies were as follows:

Company—	Bbls.
Anderson-Prichard	28
Century	2,666
Crude Oil Transportation	4,179
Empire	19,399
T. B. Slick	9,836
Magnolia	4,991
Oklahoma	15,365
Peacock & Peveto	293
Prairie	384
Shell	3,401
Sinclair	10,334
Sunray	2,064
I. T. I. O.	6,078
Tidal	3,075
Total	99,009

Oklahoma City Production

The following wells were on production during the seven days ending February 2 in the Oklahoma City Field, under the proration orders. All other wells were shut in and will be produced according to the curtailment plan.

	S-T-R	Wells	Prod.
Anderson-Prichard:			
Gibbons	1-11-3	4	6
Wright	10-11-3	1	129
A. & P. Phillips:			
Rayhill	10-11-3	1	1,067
Westfall	3-11-3	1	914
Blackwell:			
Scruggs	35-12-3	1	11
Blackwell-Jones Drlg.:			
Sullivan	1-11-3	1	177
British-American:			
Holmes	10-11-3	7	861
Capitol:			
Campbell	2-11-3	1	804
Century:			
McConnell	2-11-3	1	2,479
Coline:			
Clour	23-11-3	16	1,123
Warren	18-11-2	8	417
Continental:			
Sudik	6-10-2	4	66
Cromwell-Franklin:			
T. Park	13-11-3	32	4,033
Dengail:			
Hile	10-11-3	1	764
Denver:			
Harvey	15-11-3	1	161
Don Lavon:			
Hunsicker	2-11-3	1	2,143
I. T. I. O.:			
Barker, Drake	14-11-3	1	212
Bod. Anderson	30-11-2	3	58
Brokaw, C.	13-11-3	4	1,264
Button	19-11-2	5	14
Canfield, L.	19-11-2	2	20
Coppinger	11-11-3	8	231
Drake	14-11-3	2	139
Emmerson, N.	30-11-2	11	9
Farley, L.	19-11-2	4	202
Farley, Fuzzell	19-11-2	2	1
Ferndale, Comm.	11-11-3	5	158
Fortson, E.	24-11-3	3	3
Foster	24-11-3	1	2
Fuzzell, M.	19-11-2	3	12
Habegger	14-11-3	2	4
Hammer	11-11-3	2	8
Ivanhoe	15-11-3	2	71
Johnson	25-11-3	9	100
Jones, H. W.	1-11-3	4	362
Jones	31-11-2	14	629
Jones, Comm.	1-11-3	4	459
Lawrence Place	15-11-3	3	837
Lawton	11-11-3	2	7
Lemmon	11-11-3	5	62
Okla. State Land	36-11-3	8	145
Pasadena Heights	14-11-3	5	557
Peterson, Sad	25-11-3	8	31
Phillips	1-11-3	1	25
Precure, A.	11-11-3	1	72
Reynolds	6-10-2	1	1
Salasman	32-11-2	5	15
Starkey	11-11-3	2	7
Sudik	31-11-2	10	284
Theimer, E.	12-11-3	8	348
Trosper	13-11-3	11	285
Trosper, Clar.	14-11-3	4	264
Trosper, H. G.	14-11-3	7	172
Unsell, M.	23-11-3	6	691
Unsell-Krager	23-11-3	3	285
Viewpoint	10-11-3	2	539
Wheeland	10-11-3	1	1
Wheeler	13-11-3	3	13
Wilkie-Anderson	25-11-3	3	29
Williamson, Can	24-11-3	2	49
Julian:			
Walker	10-11-3	1	232
Kedberg:			
Burss	2-11-3	1	19
Mabee:			
Rusty	10-11-3	1	1,257
Mid-Kansas:			
Fortson	24-11-3	5	7
Mollman	23-11-3	4	135
Trosper, D. B.	19-12-1	1	162
Mid-Kansas and Ramsey:			
Messer	32-14-3	1	56
Minnehoma:			
Pugh	2-11-3	1	484
Morgan:			
Stout	2-11-3	1	743
Oils, Inc.:			
Thompson	2-11-3	1	1,504
Phillips:			
Ashcan	2-11-3	1	1,226
Black	10-11-3	1	1,271
Ciger	2-11-3	1	1,226
Day	2-11-3	1	1,467
Harrell	2-11-3	1	116
King	10-11-3	1	1,209
Lybrand	2-11-3	1	1,159
Rallen	2-11-3	1	229
Velt	2-11-3	1	146
Prairie-Slick:			
Hiddleston	19-11-2	7	34
Sigman	32-11-2	7	138
Shaffer et al:			
Baker	1-11-3	1	78
Shell:			
Potty	30-11-2	7	1,015
Sinclair:			
S. Land No. 67	36-11-3	5	7,561
Stamper	30-11-2	6	32
Skelly et al:			
Harper-Turner	3-11-3	1	352
Hurt	2-11-3	1	2,363
Tanner	10-11-3	2	1,906
Slick, T. B.:			
Campbell	3-11-3	2	2,169
Classen	2-11-3	4	3,826
Clegg	2-11-3	2	417
Foote	2-11-3	3	347
Frisco	3-11-3	2	541
Glidden	13-11-3	2	71
Martin	1-11-3	1	154
Rodman	2-11-3	1	29
Wespaco	34-12-3	1	1,375
Wilson	2-11-3	1	1,478
Slick et al:			
Alexander	2-11-3	2	751
Danreuther	2-11-3	3	211
Page	14-11-3	2	141
Lard	2-11-3	1	1,444
Sun Ray:			
Harris	2-11-3	1	225
Olafson	2-11-3	1	103
Wirt Franklin:			
Holder	2-11-3	2	243
Lowery	12-11-3	10	871
Page	35-12-3	5	746
Shehan	2-11-3	2	46
Theimer	2-11-3	13	1,601
Wright	2-11-3	3	361
Wright-Smith:			
Smith	2-11-3	2	270
Total		708	67,379
Last week		700	94,159

New wells 8. Decrease 26,780 bbls. Average per well for pool 95 bbls.

Carter County

Magnolia Petroleum Co. has the rig up for No. 4 Dickerson, SE cor. NE, Section 24-1s-3w. No. 3 Carter, NW cor. SE SW, Section 14-1s-3w, has been completed for 41 bbls. in sands 2,407 feet to 2,530 feet.

Hughes County

Magnolia Petroleum Co. staked location for No. 2 G. Hayes, NW cor. SW NW, Section 16-7-8. Minnehoma Oil Co. moved the rig in for No. 2 Brown, SE cor. NE NE, Section 17-7-8. Jarvis & Holm and others' No. 1 Street, SW cor. NW NW, Section 16-7-8, has been completed for 71,000,000 feet of gas in Booch sand 2,902-23 feet.

Kiowa County

Arrowsmith and Walker's No. 1 Potts, SE cor., Section 31-7-14w, is drilling at 290 feet.

Latimer County

Limestone Oil & Gas Co.'s No. 2 Murray, NE cor. SW SW SW, Section 15-5-18, made 2,500,000 feet of gas in sand 2,519-35 feet.

Love County

George Pace and others' No. 1 Buckheart, NE cor. NW, Section 13-8s-8, is dry and abandoned at 2,512 feet.

Marshall County

F. W. Merrick's No. 24 Null, NE cor. SE SE NW, Section 24-5s-5, Madill Pool, is drilling at 400 feet.

Muskogee County

Harsha & Dulaney's No. 1 W. Barnett, C SE SE, Section 19-16-15, is a machine. Taylor & Geiger moved a machine in for No. 5 D. Tucker, NE cor. NW, Section 16-15-15. W. J. Metzger has the machine on the location for No. 8 C. Crittenden, SE cor. SW NE SE, Section 6-14-19. John Aggas' No. 1-A Asbury, NW

cor. SE NW, Section 32-16-15, has been abandoned at 1,989 feet. C. W. Brown's No. 1-A Young, SE cor. NE, Section 15-15-15, made 1,247,400 feet of gas from sand 756-812 feet. Taylor & Geiger's No. 1 W. Tucker, CNL NW SE, Section 16-15-15, is a dry hole at 1,425 feet. Joe Paul and others' No. 1, Lot 11, Block 31, SE cor. NW SE NW, Section 21-15-18, is a dry hole at 1,421 feet. J. A. Evans and others' No. 1 Sango, CNL SW SE, Section 18-14-18, has been abandoned at 1,698 feet.

Oklahoma County

T. B. Slick estate made location for No. 1 Egbert, SW cor. SE SE SE, Section 34-12-3w, between Blocks 12 and 13, Mead Addition, Oklahoma City. Century Petroleum Co.'s No. 1 McConnell, SW cor. NW SW NW, Section 2-11-3w, has been completed for 8,856 bbls. in four hours from Wilcox sand 6,228, total depth 6,341 feet. T. B. Slick estate's No. 3 Foote, NE cor. NW SE SW, Section 2-11-3w, made 703 bbls. in 6½ hours from sand 6,220-6,566 feet. T. B. Slick estate and Atkinson's No. 1 Rodman, SW cor. NW SW, Section 2-11-3w, has been completed for 209 bbls. in four hours from sand 6,223-6,572 feet. Anderson & Prichard's No. 1 Westfall, SE cor. NW NE, Section 3-11-3w, topped Wilcox sand at 6,288 feet, drilled to 6,434 feet and made 6,400 bbls. in four hours. T. B. Slick Oil Co.'s No. 2 Campbell, NW cor. NE SE NE, Section 3-11-3w, made 8,757 bbls. in five hours from Wilcox sand topped at 6,248 feet, total depth 6,399 feet. No. 3 Frisco, C S half NE NE SE, Section 3-11-3w, has been completed for 3,791 bbls. in four hours in Wilcox sand 6,171 feet, total depth 6,361 feet. Phillips Petroleum Co.'s No. 1 Black, NE cor. NW, Section 10-11-3w, had top of Wilcox sand at 6,323 feet, drilled to 6,500 feet and made 8,896 bbls. in four hours. No. 1 King, NW cor. NE SW, Section 10-11-3w, has been completed for 8,463 bbls. in four hours from sand 6,346-6,495 feet.

Okmulgee County

R. E. Burkes and others moved a machine in for No. 2 Howard, SW cor. NE SE, Section 17-15-14.

Pittsburg County

Central States Light & Power Co. moved the rig in for No. 1 J. Carney, NW cor. NE, Section 9-7-18. Choctaw Gas Co.'s No. 2 Hayhurst, NE cor. NW NE, Section 16-7-18, gauged 8,000,000 feet of gas from sand 1,788-2,154 feet.

Pottawatomie County

Rex Moore and others' No. 1 Dobbs, SW cor. SE SE, Section 18-9-5, Earlsboro area, is a cellar. Mid-Continent Petroleum Corp. made location for No. 2 Archer, SE cor. SW SE, Section 14-6-3, West Asher Pool.

Seminole County

Droppleman, Lack and Whittworth's No. 1 Lack, SW cor. SE NW, Section 30-8-8, Wewoka Townsite Pool, made 1,950 bbls. from Cromwell sand topped at 3,070 feet, total depth 3,144 feet. Mid-Continent Petroleum Corp.'s No. 6 Bruner, SW cor. SE SE, Section 11-7-6, Little River Pool, has been completed for 360 bbls. in Cromwell sand 3,120-30 feet, total depth 3,136 feet. Carter Oil Co.'s No. 7 Tewee, NE cor. NW NE, Section 14-7-6, has been completed for 659 bbls. in sand 3,140-45 feet.

Wagoner County

Burkhart and others' No. 2 J. Irving, NW cor. SE, Section 22-18-17, is dry and abandoned at 356 feet. Cartwright & Kyle's No. 1 A. Childers, CNL NE NE, Section 32-18-17, has been abandoned at 1,050 feet. J. McCutcheon and others' No. 4 J. Brown, CEL NW SW, Section 36-16-17, is dry and abandoned at 869 feet.

MICHIGAN FIELDS

(Continued from Page 56)

Monroe gas was struck last week in the Johnson Oil Refining Co.'s No. 1 Van Allsburg, NE SE, Section 5-10n-16w, originally a Dundee oil well. Gas sands were encountered at 2,260 feet, but the largest flow was that of 25,000 feet at 2,265 feet. Drilling was discontinued at about 2,280 feet and the well was shot. Casing was jammed by the shot, however.

Muskegon Oil Corp.'s No. 1 Bouwsma, SW NW NE, Section 5-10n-16w, Muskegon Township, about half a mile northeast of the Johnson's No. 1 Van Allsburg, was dry in the Monroe sands at a total depth of 2,305 feet. It had small shows in the Traverse and Dundee but is too far off structure.

Casing was run and cemented in the Muskegon Deep Well Syndicate's No. 5 Herman Heinz, NE NE, Section 8-10n-16w, at a total depth of 4,665 feet, about 3 feet above the bottom. Water struck in the Trenton limestone at 4,575 feet will be shut off and the well continued to 5,200 feet.

Only one other well is drilling and that caved badly, filling up from about 1,900 to 1,750 feet. It is the Blue Arrow Petroleum Co.'s No. 1 Laman, SW NE, Section 8-10n-16w, Muskegon Township, on the river flats. Operators are expecting to strike the St. Peters sandstone at about 4,720 feet. The St. Peters is about 130 feet thick in the Michigan Petroleum Co.'s No. 1 C. E. Moe well, SE SE, Section 6-9n-13w, Chester Township, Ottawa County, about 17 miles southeast of the Muskegon Field. Best shows of oil and gas in the Moe well were encountered below the St. Peters sandstone.

Two permits were issued: One in the Leaton Pool, Gibson, Johnson & Borden's No. 1 Michael McGuire, NW SW, Section 36-16n-4w, Vernon Township, Isabella County, and the other, the Gordon Oil Co.'s No. 1 Noah J. Skinner, SW SE, Section 9-14n-2w, Greendale Township, Midland County.

Oceana County

Twenty-two barrels of oil were pumped from the Fruitvale Land & Lot Owners' No. 1 C. J. Sipple, southwest corner, Section 23-13n-16w, Otto Township, Oceana County, in six hours, according to officials of the syndicate. Gas flow was estimated to be about 20,000 feet, the best showing of any of the four wells drilled during the past two years in the vicinity of Rochdale Inn, Fruitvale. A second well may be drilled about half a mile east.

Buchanan & Frye, independent operators, are cleaning out No. 1 Fruitvale, Section 6 of Blue Lake Township, and have reached about 600 feet. This well has been seeping a small amount of oil and gas for six months since it was plugged and temporarily abandoned. There is considerable lease activity in the vicinity as several other drilling projects are in the wind and operators are hoping to open a new western Michigan pool.

CALIFORNIA FIELDS

(Continued from Page 56)

finished its well No. 4 pumping 175 bbls. of 16.3 gravity oil per day from 2,610 feet. On the Sill property in this field, the General Petroleum finished No. 9, a new well pumping 80 bbls. of 15.6 gravity oil per day from 2,224 feet, the hole having been finished with an 8⅝-inch liner including 135 feet of perforated. There was no change in the status of wells under way in the North Belridge Field of Kern County during the past week, although No. 1 Bloemer of the Ohio and the Union's No. 17 Belridge are getting quite deep. The Continental has completed tentative plans to offset the Union's test in Section 36-27-20, although drilling operations will probably be held in abeyance pending the outcome of work now under way. The Universal Consolidated's No. 49, a test well being drilled in the Lost Hills Field of Kern County, failed to effect a water shutoff on the 6⅝-inch water string landed at 4,960 feet, and it is the present intention of the company to drill ahead.

The Bolsa Chica Oil Co. failed to secure commercial production in its wildcat at Coal Oil Point in Santa Barbara County during the early part of the week, but another production test is scheduled to be made within the next few days. This well showed unusual promise during the course of work but a satisfactory production test has been prevented by water trouble and other mechanical difficulties. Officials of the company are optimistic over the outlook and believe that the water problem has been solved. The General Petroleum tested out its well No. 3 in the More Ranch area, east of the Elwood Field of Santa Barbara County, during the early part of the week but subsequently resumed drilling. During the course of the test, No. 3 More made 18,000,000 feet of dry gas per day from 4,261 feet. This is the third gas well to be finished on the More Ranch in the Goleta area of Santa Barbara County by the General Petroleum. The first two gas wells were shut in subsequent to completion, but No. 3 will be carried on down in search of oil production. The General Petroleum also resumed drilling operations in its tideland project located on permit No. 137. The General Petroleum validated a number of tideland permits in this area last year and their future status will probably be determined by the outcome of work on No. 1 More and the test being drilled on permit No. 137. In the Point Conception area of Santa Barbara County, the Standard has abandoned its No. 1 Gerber as a duster at 6,820 feet. The Irvine Oil Co. picked up the oil sand in No. 1 Lowe at 1,775 feet in the Santa Barbara Mesa Field and an early production test is anticipated. In the Rincon Field, located farther down along the coast line in Ventura County, the General Petroleum has reached a depth of 1,400 feet in No. 2 Needham, a tideland project being drilled on permit No. 55.

Deep Drilling

Deep drilling is occupying a prominent position in the spotlight at the present time, both in proven areas and in wildcat territory. As far as the scope of work is concerned, Kettleman Hills heads the list as future completions in the North Dome will probably all be bottomed below the 8,000-foot level. Additional deep drilling may also be anticipated in the townlot section of the Huntington Beach Field if present work in that area is successful. The Superior Oil Co., which focussed the attention of operators on the possible existence of a new deep zone in that field, has temporarily suspended work on its No. 1 fee at 7,648 feet, pending the outcome of work on the Transport Oil Co.'s No. 17 McCaslin. It might be possible, however, that the Superior may change its present plans and make an early test as this well was recently cemented through perforations at 7,473 feet. It is generally believed by those familiar with existing conditions that the Superior has cored a good sand but is marking time in order that a deep drilling campaign may not be precipitated at the present time. The Republic Petroleum Co. took out a building and drilling permit from the Huntington Beach City Council for a new deep well to be located in close proximity to the Superior and Transport project, and drilling operations are expected to get under way within the next 30 days, unless one of the tests now under way is completed in the meantime.

The Continental Oil Co. is drilling a deep test in the older section of the Seal Beach Field in order to determine the possibility of developing a new zone below present productive horizons. The Continental's exploration well is No. 24 Selover, which was down 8,351 feet a few days ago. In the Dominguez Field of Los Angeles Basin the Shell has reached a depth of 8,815 feet in No. 7 Manuel and while nothing of importance has been logged since passing through present known horizons, drilling operations will continue indefinitely. The Union has decided to abandon its Carson lease in this field without drilling a deep conclusive test, as correlation work eliminates the necessity of this unwarranted expenditure. In the Semitropic Ridge section of Kern County, the Shell has reached a depth of 9,453 feet in a wildcat located in Section 17-27-23. The Shell expects to go to at least 10,000 feet in this well, unless something of importance is picked up in the meantime. If the company reaches this depth it will have established a world's record for deep drilling. The present record is held by the Standard Oil Co., established in the drilling of No. 1 Mascot, a deep zone exploratory test in the Midway-Sunset Field of Kern County, carried down to 9,640 feet before being temporarily suspended. In the Long Beach Field of Los Angeles Basin, the Dabney-Johnston Oil Corp. is making preparations to resume drilling on well No. 80 at 8,415 feet. In the Coyote Field of Los Angeles Basin the Standard is drilling a deep test on the Bastenchury Ranch in Section 21-3-10, and at last reports had reached a depth of 7,695 feet.

ROCKY MOUNTAIN AREA

(Continued from Page 52)

rado's No. 1 Hertha, NW cor., Section 21-4n-69, Berthoud Dome, is bottomed at 3,730 feet and underreaming the 6¼-inch 100 feet off bottom. It is close to the depth at which the Muddy sand was found in No. 1-A State, next location on the north, which is making 12 bbls. natural daily from the Muddy sand after having been on production for two years.

Huerfano County

The Parker Club, Inc.'s No. 1 fee, Section 4-28s-68, Badito-Alamo Dome, is expected to resume operations shortly following extension of leases. This well found a show of oil in the top of the Lakota at 4,115 feet last year, but no test was made due to collapsed pipe. Plans are to sidetrack the six joints of 6¼-inch, lower a new string to the top of the sand and make a test. It is possible that the test will be carried on down to the Pennsylvanian.

Pueblo County

The Kuykendall Oil Corp.'s No. 1 Beecher, SW cor., Section 7-22s-66, Rock Creek, is reported abandoned at a total depth of 1,312 feet. It tested the Morrison, but did not reach the Sundance. The Anchor Oil Co.'s No. 1 Esely, SW SW, Section 35-22-67, Turtle Buttes, is shut down at 552 feet.

Fremont County

Isador Spangler's No. 1, SE SE, Section 4-20-69, South Florence, is drilling at 2,800 feet.

Moffat County

The Mountain Fuel Supply Co.'s No. 2 State, SE NE, Tract 37-12n-100, Hiawatha Dome, is drilling at 1,770 feet. It had a slight show of oil and gas in sand at 1,570-80 feet and a water sand at 1,590 feet. Formation shutoff was made with the 13⅜-inch which was run to 1,721 feet.

WYOMING

Geary Dome

The Midwest Refining Co.'s No. 11, SE NW NW, Section 32-34-77, Geary Dome, Natrona County, is feeling its way slowly ahead towards the second Wall Creek sand and is drilling at 5,244 feet in black shale. The sand is expected within the next 50 feet.

Salt Creek

The Wyoming Associated Oil Co.'s No. 26-SD-3, NW, Section 26-40-79, was completed in the third bench of the Sundance at a total depth of 2,912 feet, 12 feet in the sand, and made 815 bbls. natural through a half-inch bean the first 24 hours.

Converse County

The Ohio Oil Co.'s No. 5 Jones, NE NE, Section 9-33-76, Big Muddy, is drilling at 4,035 feet, more than 1,000 feet below the top of the Frontier. The Weisman Big Muddy Oil Co.'s No. 1, SE SW SE, Section 6-33-76, found water in the First Wall Creek below 3,290 feet and is plugging back to a shale horizon at 2,500 feet which indicated that it would be a commercial well.

Fremont County

The Producers & Refiners Corp.'s No. 10, NW cor. SW, Section 14-32-95, Big Sand Draw, the deep test which succeeded in getting through the upper gas sands in the Frontier and discovering more gas in the lower part of that formation and in the first Dakota, was cored to 4,360 feet, where it again was in sand, and is now reaming to bottom. The Texas Production Co.'s No. 1 State, SW SW, Section 36-34-95, Alkali Butte, has sidetracked pipe and lowered the 6¼-inch to 4,367 feet. Total depth is 4,485 feet.

Big Horn County

The Ohio Oil Co.'s No. 1 Smith, Lot 61, Section 33-56-97, Garland Dome, is drilling at 890 feet.

Park County

The Midwest Refining Co.'s No. 31 Rosenberg, SW SE, Section 24-58-98, Frannie Dome, is drilling at 4,180 feet in the red beds. It cut a lime shell at 4,157-60 feet.

MONTANA

Glacier County

Hill & O'Neill's No. 1 Michaels, C SE

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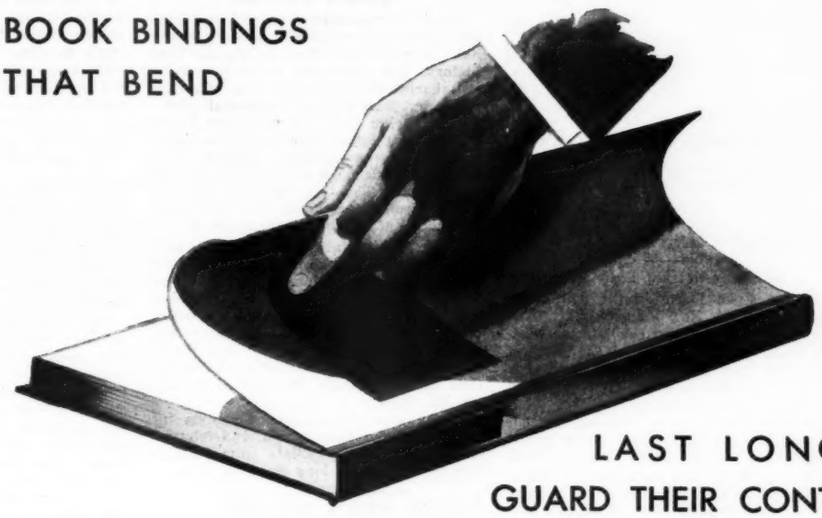

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GUIBERSON

BETTER BE SAFE THAN SORRY

SE, Section 20-36n-5w, Round Lake Dome, Cut Bank district, failed to encounter commercial production and was abandoned at 3,150 feet. It was located about a mile to the northwest of a 15,000,000-foot gas well drilled some time ago by the same interests. No. 1 Michaels topped the Kootenai at 2,360 feet and had water and a show of oil and gas in sand at 2,878-2,905 feet, followed by a small show of oil at 2,975 feet. The Ellis-Madison contact was dry at 3,078 feet and water came in at 3,113-40 feet. The B. & H. Oil Co.'s No. 1 Haines, SE SE, Section 2-34-6w, is bottomed at 2,762 feet and sidetracking pipe. It is in the top of a sand, probably the Sunburst, in which was a good show of oil of 37.9 degrees gravity.

Stillwater County

A deep test to the Madison lime will be drilled on the Big Lake structure in the spring in a joint operation by the Delmar Oil Co., the Barnsdall-Foster Co. and the Indian Territory Illuminating Oil Co. These interests have just completed leasing up a block of 20,000 acres. Rotary equipment will be used and the test may go to 7,000 feet. This field is producing around 80 bbls. a day, of which the Delmar company has 70 bbls. and the Record Petroleum Co. 10 bbls.

Rosebud County

The Prairie Oil & Gas Co.'s No. 1-X N. P. Contract 3, SW NW, Section 26-10n-39, Porcupine Dome, is drilling at 2,222 feet in gray shale, and its No. 1, Contract 4, SW SW, Section 28-11n-39, is bottomed at 1,355 feet and has cleaned out cavings and lowered the 12½-inch casing over the tools in the hole.

Toole County

The Liquid Gold Oil Co.'s No. 1 Roberts, NW NE, Section 25-36-1e, Barthelote district, is bottomed at 1,600 feet and is underreaming the 8¼-inch at 1,570 feet for a formation shutoff, and the A-1 Petroleum Co.'s No. 1 Barthelote, SE NE, Section 24-36-1e, is temporarily shut down at 200 feet. The Ashalta Oil Co.'s No. 1 Volbrecht, NE cor. SE, Section 11-37-4w, Border Field, is fighting cavy ground at 2,155 feet. The International Royalty Holding Co.'s No. 1 Henry, SW cor., Section 26-35-3e, Grandview, made a formation shutoff at 2,550 feet and is drilling ahead at 2,551 feet.

Liberty County

The Western Natural Gas Co.'s No. 2 McHoney, SE NW, Section 21-37-4e, Whitlash district, encountered a flow of 8,500,000 feet of gas at 1,122-35 feet and stopped to cement pipe before drilling deeper. It is nearly 2 miles to the west of its 9,000,000-foot gas well completed a few weeks ago.

Carbon County

The Ohio Oil Co.'s No. 1 Montana Industrial, SW NE, Section 11-7s-21, Dry Creek, is drilling at 2,400 feet, and its No. 1 Souders, Section 2-7-21, is drilling at 875 feet.

Utah

The Utah Southern Oil Co.'s No. 1 Balsey, NE NE, Section 31-23-21, Salt Valley, is shut down temporarily at 910 feet. The Virgin Dome Oil Co.'s No. 1, NW NW, Section 16-42-14w, Harrisburg district, Washington County, is drilling below 3,400 feet.

Rocky Mountain Production

Average daily runs from fields week ending February 7:

WYOMING	
Salt Creek	28,080
Big Muddy	1,920
Byron	10
Cody	10
Dallas-Derby	270
Dutton Creek	130
Elk Basin	610
Ferris	10
Frannie	960
Grass Creek	2,160
Greybull	10
Hudson	270
LaBarge	1,690
Lance Creek	140
Lost Soldier	7,190
Lovell	10
Midway	60
Oregon Basin	1,920
Osage	....
Rock River	....
Poison Spider	270
Simpson Ridge	....
Teapot	20
Warm Springs	....
Total Wyoming	45,740
MONTANA	
Buckley Border	680
Cat Creek	1,090
Dry Creek	760
Kevin-Sunburst	4,570
Lake Basin	70
Pondera	1,560
Total Montana	8,660
COLORADO	
Florence	420
Fort Collins	1,100
Iles	990
Orchard	400
Moffat	1,110
Rangely	50
Tow Creek	350
Total Colorado	4,420
NEW MEXICO	
Rattlesnake	1,200
Hogback	450
Table Mesa	70
Artesia	325
Cap Rock	409
Getty	111
Hobbs	32,614
Jal	1,084
Lea	2,093
Eunice	2,406
Texas Pacific area	251
Total New Mexico	41,013
Total Rocky Mountain	99,833
Total previous week	95,647
Difference	4,186

GULF COAST FIELDS

(Continued from Page 50)

the Lost Lake Dome in the drilling of Pure Oil Co.'s No. 5 Lost Lake. This test, a deep wildcat, on the extreme western flank of the dome and the farthest west test ever drilled in that area, has found conditions entirely different from anything else yet found on the Gulf Coast so far as known, although irregularities are typical of salt dome operations. Late in the week this test was drilling in what has been termed granular anhydrite at 6,607 feet after passing out of salt at 6,591 feet. The salt protrusion drilled through was topped at 6,280 feet and underlaid another mass of granular anhydrite which had been entered at 5,431 feet. This granular anhydrite, which resembles very closely a soft sand, although definitely anhydrite, is peculiar to this test and is under a stratum of ordinary anhydrite at 5,396-5,431 feet. The test encountered a thin ledge of calcite cap rock at 5,160-85 feet, then anhydrite at 5,185-5,234 feet, formation 5,234-5,396 feet, and then went back into anhydrite. These conditions have served to indicate that the Lost Lake Dome, like Barbers Hill and Allen has an overhanging ledge of cap rock and salt.

For the second week in succession there were no new completions at Barbers Hill although activity there indicated further increases with additional tests getting under way in the drilling up of the west flank of the dome. Humphreys Corp.'s No. 10-A Kirby, which had been watched for an important extension northward of the pool on the northwest side of the dome, tested salt water in sand at 6,378 feet, 41 feet of screen being set at that depth. It is to be deepened.

RECEIVE SHIPMENTS OF PIPE LINE GASOLINE

(Continued from Page 62)

pumps "boost" the flow of gasoline along the line to its destination and will require an operating force of from six to nine men at each station. Building dimensions are: Length—75 feet, width—50 feet, and height—20 feet.

Due to the fact that many of these stations will be situated at some distance from centers of population, the Great Lakes company is also planning the construction of several cottages to house the families of men employed. These cottages are to be of red brick also, and will contain four rooms. They are to be modern throughout. If a station is located near some city, the cottages will not be built.

The entire Great Lakes line when filled, will hold 300,000 bbls. of gasoline, and all of the storage tanks along the route will accommodate 1,300,000 bbls.

The entire Great Lakes general office force was moved to headquarters in the Fairfax Airport Building in Kansas City, Kans., on January 30 and began work there on Saturday, January 31. Members of the Great Lakes personnel who were transferred included employes in the executive, engineering, accounting, traffic, legal, claims and right of way, tax, motor transportation and purchasing departments. All office equipment owned by the Great Lakes company was also transferred to Kansas City.

The Fairfax Building is situated only one-fourth of a mile east of the Great Lakes terminal. A small hangar at the airport is being used by the Great Lakes company to shelter its 5-place Travel Air cabin monoplane piloted by J. E. Grimmett, and also serves as a garage for company-owned automobiles.

Railway Facilities

Ideal transportation facilities have been planned for this Kansas City terminal. For the first time in Kansas City history, five important railway systems are sharing in the construction of an interchange line to one industrial plant. The following railroads will have access to the Great Lakes terminal: The Union Pacific, Missouri Pacific, Kansas City Southern, Chicago & Great Western, and the Frisco. The terminal pump station is practically completed with the walls up and all of the machinery in place.

Other transportation possibilities which will be realized in the near future include marine loading equipment, situated on the banks of the Missouri River, and a loading rack for tank trucks. A boiler plant, Ethyl blending plant, and the following storage tanks are also included in the terminal equipment: One 35,000-bbl. tank, four 25,000-bbl. tanks, and one 80,000-bbl. tank.

A complete communication system including telephone, telegraph, and teletype facilities will soon radiate from Kansas City to all points along the line.

CRUDE PRICE BELOW THE PRODUCTION COST

(Continued from Page 34)

gasoline, exclusive of state taxes, in 50 representative cities of the United States for the period 1918-1928, inclusive, was 22.63 cents per gallon, and for 1921-1928, inclusive, 21.09 cents. Today that price is 14.50 cents.

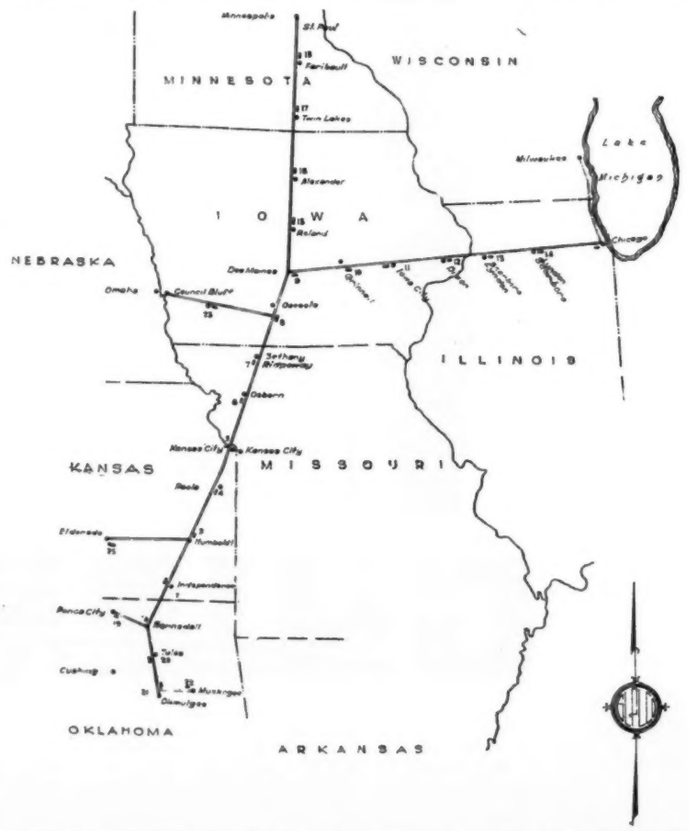
It is too often and too generally assumed that because of fairly satisfactory earnings on the part of some units of the industry, the industry as a whole is a tremendously profitable activity, whereas in fact it is not.

The compilations made from United States Government figures indicate that average annual net earnings of the industry on the capital invested have amounted to 2.16 per cent for the years 1921-1928, inclusive, (1929 not being available). A brief statement from these compilations which represents about 90 per cent of the industry, the returns including all companies reporting a net income of more than $100,000 or a deficit of more than $500,000 in any one year during the period, shows that the Federal income tax and other taxes, exclusive of state gasoline taxes, for this period of eight years amount to 56 per cent of the net earnings of the industry, and it is estimated that for the years 1929 and 1930 the state gasoline taxes will exceed the net earnings of the industry.

It seems absurd to raise the question of monopoly. There are nearly 5,000 strictly producing companies making returns for Federal taxes, and more than 300 refining companies, many of which are also producing companies, making returns for Federal taxes. Further, the absence of monopoly is evident in the great duplication of facilities and activities from the producing fields through to the markets. Filling stations, many of which are unnecessary, are visible evidence to everyone, and are the result of uncontrolled, unrestricted, encouraged competition, much of which is destructive, making profitable, stable conditions impossible. One way within the law to bring about a near monopoly is to further tax and burden the industry to a point where only a few who have unlimited resources and credit can carry on.

INDUSTRY AT FAULT IF CONSERVATION FAILS

NEW YORK, Feb. 9.—The oil industry itself or certain units of it will be at fault if all the expected accomplishments fails to attend the conservation efforts recommended by the Federal Oil Conservation Board and attempted in various forms for several years, R. C. Holmes, president of The Texas Company, said



Map showing main and connecting lines and pump stations of the Great Lakes Pipe Line Co.

in a statement in the Texaco Star, official publication of The Texas Company.

Mr. Holmes referred to the formation two years ago of a general conservation committee, composed of representatives of five regions of the United States, Mexico and northern South America, and called attention to unanimous acceptance of the committee's declaration "that any satisfactory or creditable conservation activity would lead the committee to believe that the amount of crude oil produced in the year 1928 would be a sufficient quantity for the years 1929, 1930 and 1931.

"Nevertheless," said Mr. Holmes, "because of varying difficulties, including the inadequacy of the laws, the varying individual interests, and the lack of fullest co-operation, production in all districts increased very materially in 1929, notwithstanding substantial restriction in many of the fields."

Improvement, however, was effected during the latter part of 1929 and through 1930.

"As very often happens," Mr. Holmes continued, "worthy ventures or efforts fail on the eve of success because of the lack of the fullest possible co-operation and intelligent consideration. A great many have made substantial sacrifices in this effort and it would be most deplorable and unfortunate if one or more who seek some special individual advantages, temporary or otherwise, or the few who are seeking relief from some of the inevitable inequities of the situation should succeed in attempts to break down the structure. This effort was and is in the interest of the industry as a whole, and not one from which the industry or the country can back away without serious consequences. Those who are fully informed know that the large buyers are also large producers and if any producer or group of producers should open up their wells, adjoining wells would be opened up and other fields would be opened up in a similar manner; and those who are buyers today would of necessity be caring for their own increased forced production and as a consequence would be buyers of less quantities. So that the result would unquestionably be materially lower crude prices and materially diminished purchases.

"No one will be justified in adding to storage or aboveground stocks which are already excessive and a source of unnecessary and unwarranted waste. The economies that are possible in the situation can only come through proper and orderly restriction and control of production. The time when crude oil supplies could be brought into balance with consumption by a short period of low prices has passed."

JOSEPH E. ARMSTRONG DIES

CHATHAM, Ontario, Feb. 7.—Joseph E. Armstrong, for many years a prominent oil operator in the Petrolia Field, died at Petrolia on January 31 from the effects of a fall on ice a few hours earlier. He was 65 years of age, and came to Petrolia in 1885, being first a driller and later an extensive producer. He was elected to the Dominion parliament in 1904 in the Conservative interests, serving until 1921, and again in 1925. Mr. Armstrong had only a few days before been named to head a deputation of oil producers to wait on the federal government in support of restoration of the crude petroleum bounty.

OKLAHOMA P. L. STATEMENT

The Oklahoma Pipe Line Co. reports that in January it ran 2,306,235 bbls. of crude oil from wells in Kansas and Oklahoma. Its shipments were 2,455,605 bbls.; stocks 2,594,115.77 bbls.

EAST CENTRAL TEXAS WILDCATS

(Continued from Page 59)

E. C. Laster et al's No. 1 B. B. Gray, 1,650 ft. N and 2,425 ft. E of B. B. Gray 228.25-ac. tract, McLain Sur. ..... Drlg. 190 ft.

E. C. Laster's No. 1 Daisy Bradford, 150 ft. from E and 150 ft. from S of Lot 14, Juan Ximenes Sur. .. Drill stem test failed; shut down 3,585 ft.

Lide et al's No. 1 Calvin Young, 3,015 ft. E and 3,373 ft. S. M. J. Prue Sur. ..... Initial prod. 2,475 bbls. through 2½-in. tubing first 18 hours; T. D. 3,688 ft.

Luling Oil & Gas Co.'s No. 1 Bright Well (Porter), 150 ft. N and 150 ft. W of Robert Winn Sur. ..... Set surface csg.

Mass et al's No. 1 Matthews, 3,244 ft. from N, 4,356 ft from E, Dalines Cartimas Sur. ..... Shut down 2,338 ft.

Moss & Urschel's No. 1 Mayfield-Alford, 221 ft. S and 200 ft. W of 10-ac. lease, Juan Ximenes Sur. ..... Drlg. 3,120 ft.; base Pecan Gap 2,947 ft.

A. A. Malone's No. 1 G. T. Moore, 150 ft. from E and 150 ft. from S, Juan Ximenes Sur. ..... Derrick.

W. Olvey's No. 1 Mrs. W. R. Crim, 150 ft. N and 150 ft. W of lease, Robert E. Winn Sur. ..... Drlg. 2,745 ft.; top Pecan Gap 2,625 ft. (rotary).

Olsen Bros.' No. 1 Brown, 300 ft. N and 300 ft. W of Haynes' No. 1 Brown, M. J. Prue Sur. ..... Derrick.

Pearl Oil Co.'s No. 1 D. W. Eaton, 975 ft. from most southerly S line of middle tract and 400 ft. from W line in Francisco Cordova Sur. ..... Shut down 40 ft.

Rusk County Oil Co.'s No. 1 Robertson, 150 ft. N along W line of George Guthrie Sur. from SE cor. and 150 ft. W of E line of Robertson 20-ac. tract, R. H. Pinney Sur. ..... Fishing 1,285 ft.

George Page's No. 1 William Camp, 150 ft. from S and 650 ft. from W of 5-ac. tract, J. Ximenes Sur. ..... Rigged up and shut down.

Rusco Oil Co.'s No. 1 Daisy Bradford, 150 ft. from E and 330 ft. from W, Lot 13, Juan Ximenes Sur. .. Erecting pumping rig; T. D. 3,628 ft.

Nat Saddler's No. 1 Ed Sparks, 350 ft. from E and 150 ft. from S of survey, L. C. Rugg Sur. ..... Drlg. 650 ft.

Sinclair O. & G. Co.'s No. 1 W. W. Holland, 150 ft. from S and 197 ft. W of 50-ac. tract, Juan Ximenes Sur. ..... Derrick and rig up.

Sinclair O. & G. Co.'s No. 2 Holland, 150 ft. from E and 580 ft. S of lease and Holland 105 acres, Juan Ximenes Sur. ..... Building derrick.

E. R. Tennant's No. 1 Daisy Bradford, 150 ft. E and 400 ft. S of NE cor. of Ashby 38-ac. tract, Juan Ximenes Sur. ..... Drlg. 2,991 ft.; top Pecan Gap 2,615 ft.

Tennant Receiver's No. 1 Harvey Brooks, 1,200 ft. from N and 150 ft. from W of Brooks 176-ac. tract, M. J. Prue Sur. ..... Derrick.

Tidal Oil Co.'s No. 1 W. W. Holland, 150 ft. from S and 1,252 ft. from W of Holland 105-ac. tract, Juan Ximenes Sur. ..... Set 275 ft. 12-in. csg.

United Prod. Oil Co.'s No. 1 Mayfield-Alford, 150 ft. from S and 2,233 ft. from W of 105-ac. tract, Juan Ximenes Sur. ..... Sand 3,595-3,606 ft.; run csg.; T. D. 3,607 ft.

Warner-Quinlan's No. 1 Camp, 197 ft. from N and 271 ft. from W of Mrs. C. Long 3-ac. lease, Juan Ximenes Sur. ..... Drlg. 2,150 ft.

SMITH COUNTY

Thayer & Rogers' No. 1 Willingham, 150 ft. N and W of 14.5-ac. tract, Jacob Hernin Sur. ..... Shut down 2,100 ft.

Winona O. & G. Co.'s No. 1 Freeman, 150 ft. from S, W of 89-ac. tract in A. J. Legrone Sur., 4 miles SE of Winona ..... Shut down 3,681 ft.

VAN ZANDT COUNTY

Burton Drlg. Co.'s No. 1 Florez, 2,250 ft. from N and 150 ft. from W of SE cor. in Peter Holmes Sur. .... Location.

Cranfill & Germany's No. 1 Swain, 137 ft. N and 50 ft. from W of excess strip on W side of O. L. and L. L. Swain farm ..... Shut down 14 ft.

T. Daniels' No. 1 Fannie Cumbine, 185 ft. S and 175 ft. E of NW cor. 156-ac. tract, John Wright Sur. ..... Temporarily abnd.

Dennis Oil Co.'s No. 1 C. W. Morris, 100 ft. from N and 300 ft. from E lines of Morris 160-ac. tract in C. L. Morris Sur., 5 miles SE of Ben Wheeler .... Temporarily abnd.

J. C. Fure's No. 1 P. S. Hand, C of Hand's 50-ac. tract, William Shuman Sur. ..... Drlg. 5,140 ft.

H. Helms et al's No. 1 Bogue, 647 ft. W and 155 ft. S of SE cor. of J. M. Brown 70-ac. in Marshall University Sur., SE of Van ... . Drlg. 2,938 ft.

Humble Oil & Ref. Co.'s No. 1 L. A. Dowdle, 1,027 ft. N of S line and 150 ft. E of W line, William Daniel Sur. ..... Temp. abnd. 2,987 ft.

Humble Oil & Ref. Co.'s No. 9 Ruth Starr Blake, 2,340 ft. from E and 620 ft. from N of N line of Pure Oil Co.'s tract No. 2, John Walling Sur. ..... Rig up.

Imperator Oil Co.'s No. 2 G. W. Carter, 175 ft. from S and 35 ft. from W of G. W. Carter 171-ac. tract, William Daniel Sur. ..... Shut down.

Kelly Oil & Gas Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... Shut down 2,300 ft.

Neil McMehory's No. 1 R. V. Murphy, 150 ft. from N and 150 ft. W of survey, H. Bailey Sur. ..... Shut down 263 ft.

Pure Oil Co.'s No. 3 R. A. Howell, 225 ft. N and E of SW cor., Mund Gross Sur. ..... Drlg. plug 2,709 ft.

Pure Oil Co.'s No. 2 A. G. Tunnell, 250 ft. N of S line and 200 ft. W of E line, John Walling Sur. ..... T. D. 2,942 ft.; testing; shut in.

Pure Oil Co.'s No. 1 Davis, 127 ft. from S and 200 ft. from W of 139-ac. tract, Nacogdoches County School Land ..... Derrick standing.

Pure Oil Co.'s No. 4 W. F. Swain, 250 ft. S of N line and 200 ft. W of E line of lease, Mund Gross Sur. ..... Derrick.

Pure Oil Co.'s No. 3 O. L. Swain, 250 ft. S of N line and 250 ft. W of E line, John Walling Sur. ..... Coring 2,860 ft.

Pure Oil Co.'s No. 2 J. D. Miller, 250 ft. N of S line and 250 ft. E of W line of lease in John Walling Sur. ..... Drlg. 2,616 ft.

Pure Oil Co.'s No. 3 R. H. Peters, 250 ft. E of W line and 250 ft. N of S line of lease in Nacogdoches County School Land Sur. ..... Running 7-in. csg. 2,848 ft.

Pure Oil Co.'s No. 2 L. A. Smith, 632 ft. N of S line and 250 ft. E of W line of lease, John Walling Sur. ..... Running tubing 2,928 ft.

Pure Oil Co.'s No. 3 F. B. Smith, 250 ft. S and 200 ft. W of SE cor. of Ella York 39.6-ac. tract, John Walling Sur. ..... Drlg. 2,856 ft.

Roy Stumpff's No. 1 Riggs, 169 ft. from E and 155 ft. from S of 3-ac. tract, William Daniel Sur. ..... Derrick (rotary).

Sun Oil Co.'s No. 2 T. J. Wallace, 250 ft. S of N line and 250 ft. W of E line of lease, John Walling Sur... Location.

Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. .... Shut down 1,028 ft.

Vitek Oil Co.'s No. 1 Smith, 150 ft. S and 15 ft. from W of L. A. Smith 40-ac. farm in John Walling Sur.... Derrick.

Whitmore Oil & Gas Co.'s No. 1 R. W. Beggs, 300 ft. from S and 600 ft. from W, Raquet Sur. ..... Drlg. 2,637 ft.

Wilson et al's No. 1 Stribling, 1,563 ft. W of E line and 800 ft. S of N line of M. B. Fisher 172-ac. in Phillips Mason Sur. ..... Shut down 1,590 ft.

WOOD COUNTY

Loche & Clark's No. 1 A. C. Pick, 165 ft. S of NE cor. G. C. Reeves 25-ac. tract, Daniel Fuller Sur. ... Shut down 997 ft.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 64)

Taylor-Link Oil Co.'s No. 1 Mary Bullock et al, 330 ft. from N and E of Sec. 41, T.C. Sur. ..... Shut down 2,300 ft.

CULBERSON COUNTY

Cranfill Bros. and Sholts' No. 1 Seay, 2,310 ft. from S and W, Sec. 45, Blk. 60, Public School Land ..... Shut down 460 ft.

Grisham & Hunter's No. 2 Garren, 2,475 ft. from S and 1,566 ft. from E, Sec. 20, Blk. 89, Public School Land.. Shut down 1,520 ft.; show oil 1,400-15 ft.

Kornrumpf et al's No. 1 Garren, 330 ft. S and W, Sec. 15, Blk. 79, Public School Land ..... Shut down 1,520 ft.; show oil 1,400-15 ft.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW, Sec. 46, Blk. M, E.L.&R.R. ..... Spudded 20 ft. and shut down.

ECTOR COUNTY

Galt, Brown & Penn's No. 1 Cowden, C SE Sec. 12, Blk, 44, Twp. 2s, T.&P. Sur. ..... Shut down 180 ft.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW, Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur. ..... Shut down 3,280 ft.

Southern Crude Oil Pur. Co.'s No. 2 Crowder & Co., 660 ft. from S and W of NE cor., Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur. ..... Drlg. 3,100 ft.

EL PASO COUNTY

Lane-The Texas Company's No. 1 Malone, 2,110 ft. from SW and NW of Sec. 46, J. M. Day Sur. ..... Shut down 3,089 ft.

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines, Sur. No. 254, S.F. No. 7,247 ..... Driving 18-in. casing; total depth 185 ft.

FISHER COUNTY

Condor Pet. Co.'s No. 1 Wilson, 330 ft. from N and 1,200 ft. from W, Sec. 6, W. E. Richardson Sur. ..... Testing 3,194 ft.

Cranfill & Reynolds' No. 2 Flannigan, 300 ft. from S and E of W half Sec. 200, B.B.B.&C. Sur. ..... Top pay 3,188 ft.; 2,300 ft. oil in hole.

Roeser & Pendleton's No. 1 Littleton, 1,600 ft. from S and 660 ft. from W of SE, Sec. 191, B.B.B.&C. Sur.... Drlg. 2,930 ft.

Roeser & Pendleton's No. 1 Grible (Russell), 660 ft. from S and 440 ft. from W of NW Sec. 210, B.B.B. &C. Sur. ..... Drlg. 1,265 ft.

GAINES COUNTY

Texas Consolidated Oil Co. et al's No. 1 Jones, 2,310 ft. from NE, Sec. 4, Blk. A-8, P.S.L. Sur. ..... Underreaming 10-in. casing 1,175 ft.; total depth 1,220 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 4, H.&G.N. Sur. ..... Spudded and shut down.

Perry & Porsey's No. 1 Justice, 1,980 ft. from S and 1,680 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-foot cable tool test) ..... Moving in material.

GLASSCOCK COUNTY

World Oil Co.'s No. 3-C McDowell, 2,310 ft. from S and W of NE cor., Sec. 21, Blk. 34, Twp. 2s, T.&P. Sur. .. Temp. abandd.; total depth 660 ft.

HOWARD COUNTY

G. F. Getty's No. 1 Snyder, Sec. 27, Blk. 10, Twp. 1s, SW cor. NE NE ..... Shut down 3,500 ft.

Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W. Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur... Location.

Group No. 1 Oil Corp.'s No. 2 Eason, 1,320 ft. from S and W, Sec. 6, Blk. 32, Twp. 2s, T.&P. Sur. ..... Drlg. 2,195 ft.

Moody Oil Corp.'s No. 23-B Roberts, 990 ft. from N and W of Sec. 137, Blk. 29 ..... Temp. abandd. 261 ft.

HUDSPETH COUNTY

Patillo & Welch's No. 1 Briggs, 300 ft. from S and W, Sec. 13, Blk. 73, Twp. 7, T.&P. Sur. ..... Location.

Theison's No. 1 University, 3,050 ft. from S and 2,225 ft. from E of Sec. 17, Blk. E ..... Spudded 35 ft. and shut down.

IRION COUNTY

Central Oil Co.'s No. 2 Horney, 150 ft. from N and 1,430 ft. from E. Sec. 3, Blk. 3, H.&T.C. Sur. ..... Shut down 1,353 ft.
Denny & Andrews' No. 1 Tankersley, 1,900 ft. from E and 460 ft. from S of H. J. Volker Sur. No. 733 ..... Shut down 1,320 ft.
Dixie Oil Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. ..... Drlg. 1,080 ft.
Straughn & Texannati Oil Co.'s No. 1 Tankersley, 150 ft. from S and 750 ft. from W of Sec. 4, Gonzales County School Land ..... Underreaming 6⅝-in. casing at 1,462 ft.; total depth 1,473 ft.

F. F. Webb's No. 1 W. H. Williams, 300 ft. from E and 750 ft. from S line, SW NE, Sec. 10, Gonzales County School Land ..... Shut down 100 ft.

JONES COUNTY

Bond & Trout's No. 1 Williams, 330 ft. S and E of SW cor. of J. W. Martin Sur. A-1,308 in Sec. 13 ..... Drlg. 2,330 ft.
J. L. Hart et al's No. 1 Roberts ..... Total depth 1,000 ft.
Jameson et al's No. 1 King, 4,651 ft. from S and 150 ft. from E of M. Bueno Sur. No. 196 ..... Drlg. by tools 1,550 ft.
Shaheen & Duffy's No. 1 King, 165 ft. E and 79 ft. S of NE cor. of Lot 6, Bueno Sur. No. 197 but in No. 196 ..... Shut down 2,007 ft.; shut in for proration.
Shaheen and Prairie O. & G. Co.'s No. 1 King, 165 ft. N and 150 ft. W of SE cor. Lot 7, M. Bueno Sur. No. 197 ..... Location.
Shaheen et al's No. 1 Chittum, 165 ft. from S and W of 139.8-acre farm in G. Martinez Sur. No. 195 ..... Moving in material.
Union Oil Co. of Nevada & Shaheen's No. 1 King, 200 ft. from N and W, Lot 5, M. Bueno Sur. No. 197 ..... Drlg. 1,735 ft.
Yingling et al's No. 1 Williams, 330 ft. N and E of SE cor. of Cade 160-acre tract but in Williams 200-acre farm, Sec. 17, Blk. 19, T.&P. Sur. ..... Rig.

LOVING COUNTY

Cromwell et al's No. 1 Russell et al, 2,310 ft. from NE and 330 ft. from NW, Sec. 80, Blk. 1, W.&N.W. Sur. .. Running 6⅝-in. casing 4,052 ft.
Douglas et al's No. 1 Wheat & Ramsey, 330 ft. from SE and 2,310 ft. from SW, Sec. 83, Blk. 1, W.&N.W. Sur. .. Drlg. 2,460 ft.
Eppenauer et al's No. 2 Allen, 2,310 ft. from NE and 330 ft. from NW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Cellar.
Falbre & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW, Sec. 79, Blk. 33, H.&T.C. Sur. ..... Rig.
Henshaw et al's No. 2 Reagan & McElvain, 1,650 ft. from SW and 990 ft. from SE, Sec. 84, Blk. 7, W.&N.W. Sur. ..... Rig.
Hoffman et al's No. 1 Ramsey et al, 330 ft. NE and SE Sec. 83, Blk. 1, W.&N.W. Sur. ..... Rig.
Hoffman et al's No. 2 Ramsey et al, 2,310 ft. from NE and 330 ft. from SE, Sec. 83 ..... Location.
Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Shut down 3,383 ft.
Lockhart & Co.'s No. 2 fee, 676 ft. S, 330 ft. W, Sec. 91, Blk. 1, W.&N.W. Sur. ..... Drlg. 4,055 ft.
Lockhart's No. 1 Hubbard, 6,930 ft. from NE and 330 ft. from SE, Sec. 33, Blk. 33, H.&T.C. Sur. ..... Drlg. 1,700 ft.
Lockhart & Co.'s No. 3 Hubbard, 1,650 ft. from NE line, 330 ft. NW line of Sec. 33, H.&T.C. Sur. ..... Rigged up and shut down.
Miller et al's No. 1 Chapman, 225 ft. from NW and 285 ft. from SW line, Sec. 71, W.&N.W. Sur. ..... Drlg. 4,379 ft.
Rush et al's No. 1 Wheat, 330 ft. from NW and SW, Sec. 77, Blk. 1, W.&N.W. Sur. ..... Cellar.
Slagel Drlg. Co.'s No. 1 Cartwright et al, 2,310 ft. from S and 990 ft. from W, Sec. 1, Blk. 57, Twp. 1, T.&P. Sur. ..... Drlg. 1,985 ft.
Tennant et al's No. 1 Martin, 990 ft. from NW and SW Sec. 66, Blk. 1, W.&N.W. Sur. ..... Rig.
California Co.'s No. 2 Allen, 2,310 ft. from SE and SW lines, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Drlg. 635 ft.
California Co.'s No. 3 Allen, 2,191 ft. from NW and 2,183 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. .. Location.
California Co.'s No. 4 Allen, 3,121 ft. from NW and 3,113 ft. from SW, Sec. 90, Blk. 1 ..... Location.
California Co.'s No. 7 Reagan & McElvain, 2,032 ft. from SE and 1,014 ft. from NE of Sec. 84, Blk. 1, W.&N.W. Sur. ..... Running 6⅝-in. casing 4,135 ft.
West Texas Pet. Corp.'s No. 1 Salsbury, 330 ft. from NW and SW Sec. 89, Blk. 1, W.&N.W. Sur. ..... Drlg. 500 ft.

MENARD COUNTY

Priest's No. 1 Sorrell, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... Shut down 2,712 ft.

MITCHELL COUNTY

Lewis & Slagel's No. 1 Bell ..... Flowed 55 bbls. second 24 hrs. after second shot Jan. 25, 1931; cleaning out; total depth 2,827 ft.

PECOS COUNTY

Bell et al's No. 1 Eaton (Sun Oil Co.), 2,310 ft. from NE and SE, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Shut down 1,609 ft.
Culberson Bros.' No. 1 Tippett (Humble), 150 ft. S and 843 ft. E of C Sec. 40, Blk. 194, G.C.&S.F. Sur. ..... Location.
Dittman's No. 1 Jackson, 2,310 ft. from NE and 330 ft. from NW, Sec. 28, Blk. 3, H.&T.C. Sur. ..... Drlg. 210 ft.
Dittman's No. 2 Eaton, 990 ft. from SW and 330 ft. from SE, Sec. 35, Blk. 2, H.&T.C. Sur. ..... Location.
Humble Oil & Ref. Co.'s No. 1 Kokernot, 1,320 ft. from N line and 1,467 ft. from W line of Sec. 227, Blk. 10, G.H.&S.A. Sur. ..... Shut down 6,170 ft.
Lancaster's No. 1 Eaton (Pure), 330 ft. from SE and SW, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Drlg. 715 ft.
Magnolia Pet. Co.'s No. 1 Eaton, 2,310 ft. from SW and 330 ft. from NW, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Drlg. 680 ft.
Mann's No. 1 Schraft & Blackman, 3,000 ft. from SW and 990 ft. from SE, Sec. 32, Blk. 3, H.&T.C. Sur. .... Shut down 2,098 ft.
McCurdy & Brown's No. 2 Tippett, 150 ft. from N and W of SE, Sec. 40, Blk. 104, G.C.&S.F. Sur. ..... Location.
McCarty Oil Co.'s No. 3 Gray, 760 ft. from N and 2,260 ft. from W, Sec. 591, G.C.&S.F. Sur. ..... Fishing 1,437 ft.
Messenger et al's No. 1 Butz, 1,830 ft. from NW and 1,170 ft. from SW, Sec. 54, Blk. 16, E.&G.N. Sur. .... Shut down 1,299 ft.
Mid-Kansas O. & G. Co. et al's No. 1-A Sellman, 250 ft. from S and 330 ft. from W, Sec. 13, Blk. 194, G.C. &S.F. Sur. ..... Drlg. 1,916 ft.
J. R. Miller et al's No. 1 Bennett, 359 ft. W of CWL, Sec. 1, Blk. 119, G.C.&S.F. Sur. ..... Shut down 2,282 ft.
J. D. O'Mara's No. 1 Streety, S of Sec. 1, W. P. Howard Sur. ..... Shut down 2,210 ft.
Penn Oil Co. et al's No. 1 Alvis, 2,358 ft. from S and 1,327 ft. from W, Sec. 155, Blk. 3, T.&P. Sur. ..... Drlg. 1,575 ft.
Perren Oil Co.'s No. 2 Eaton, C of E, Sec. 27, Blk. 3, H.&T.C. Sur. ..... Drlg. by tools 1,765 ft.
Pure Oil Co.'s No. 1 Harrison, 2,310 ft. from N and 330 ft. from W of Sec. 203, Blk. 3, T.&P. Sur. ..... Shut down 5,000 ft.
Riser & White's No. 1 Riser, 2,297 ft. from S and 997 ft. from E of Sec. 24, Blk. 12, H.&G.N. Sur. ..... Shut down 500 ft.
Schilling & Slaughter's No. 1 Yates, 1,580 ft. N and 150 ft. E of NW cor. Runnels County School Land, but located in Sec. 70, Blk. 1, I.&G.N. Sur. ..... Shut down 337 ft.
Southern Crude Oil Pur. Co.'s No. 1 Schraft & Blackman, 4,550 ft. 40° E and 330 ft. 50° W of most southerly cor., Sec. 38, Blk. 3, H.&T.C. Sur. ..... Drlg. 2,402 ft.
California Co. et al's No. 1 Thomas, 990 ft. from NW and SW, Sec. 31, Blk. 34, H.&T.C. Sur. ..... Location.
The Texas Company's No. 1 Wright, 660 ft. S and E of NW cor., Sec. 9, Blk. 131, T.&St.L. Sur. ..... Shut down 3,504 ft.
Williams & Moran's No. 1 Heiner Est., 450 ft. from N and 2,490 ft. from W of Sec. 590, G.C.&S.F. Sur. ..... Shut down 1,750 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,120 ft. S and 1,100 ft. from W, Sec. 25, Blk. 9 ..... Location.

REEVES COUNTY

R. T. Hansford's No. 1 Williams, 150 ft. from S and W, Sec. 17, Blk. 6, H.&G.N. Sur. ..... Shut down 380 ft.
Riggs & Smith's No. 1 Lee Monroe, 2,190 ft. from NE and 330 ft. from NW line, Sec. 34, Blk. 8, H.&L.N. Sur. ..... Shut down 264 ft.
Salsbury & Gregory's No. 1 Young Bell, 1,170 ft. from N and 330 ft. from NW line, Sec. 34, Blk. 7, H.&L.N.... Temporarily abandoned.
Lee O. White et al's No. 1 Hershersor, 330 ft. from N and W lines of Sec. 5, Blk. 51, Twp. 10, T.&P. Sur... Shut down 4,415 ft.
California Co.'s No. 2 Kloh & Rumsey, 990 ft. from S and 1,520 ft. from E, Sec. 11, Blk. 54, Twp. 4, T.&P. Sur. ..... Total depth 1,187 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 419 ..... Shut down 2,175 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Drlg. 900 ft.
Teas & Gant's No. 1 Allison, 1,320 ft. N and E of SW cor. Sec. 27, Blk. K, G.H.&S.A. Sur. ..... Shut down 4,780 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,362 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... Underreaming 12½-in. casing; total depth 1,060 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,470 ft. from W, G.H.&S.A. Sur. ..... Shut down 5,027 ft.

SCURRY COUNTY

G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, E.&T.C. Sur. ..... Shut down 4,970 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Cellar.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 155, Blk. 97, H.&T.C. Sur. ..... Shut down 2,316 ft.

STERLING COUNTY

Beesley et al's No. 1 Foster, 2,940 ft. N and 300 ft. W of SW cor. Sec. 7, Blk. 22, H.&T.C. Sur., but in Sec. 16, Blk. 21, Twp. 4s, T.&P. Sur. ..... Drilled 211 ft. on new hole; now shut down.

TAYLOR COUNTY

John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor., Sec. 46, Lunatic Asylum Land ..... Shut down 6,251 ft.
Sanger et al's No. 1 City of Abilene, 830 ft. from S and 1,400 ft. from E of Sec. 66, Blind Asylum Land ..... Drlg. 2,705 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW, Sec. 155, Blk. D, M.-K.-T. Sur. ..... Shut down 2,669 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C, Sec. 6, Georgetown Ry. Sur. ..... Shut down 3,150 ft.
Miller Bros.' No. 1 Allison & Burke, C NW cor., Sec. 10, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.
Mrs. J. B. McPhees' No. 1 Sam Belt, C, Sec. 16, Blk. D-7, E.L. Sur. ..... Shut down 880 ft.; moved off machine.
Transcontinental Oil Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur.... Shut down 5,530 ft.
Woodley & Jones' No. 1 Pankenham, C SE NW, Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... Shut down 640 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 2,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... Shut down 760 ft.; show oil and gas 725 ft.
Fitzgerald & Taliaferro's No. 1 Bennett, C SW, Sec. 1,628, E. H. Dinger Sur. ..... Plugged back to 2,405 ft. to straighten hole; shut down 2,447 ft.
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. .... Shut down 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... Shut down 200 ft.

UPTON COUNTY

Corzelius et al's No. 1 Shirk (Tidal Oil Co.), 2,317 ft. from W and 418 ft. from S, Sec. 15, Blk. 3, M.-K.-T... Shut down 2,728 ft.
Farley et al's No. 1 Lane, 330 ft. from S and W of NW, Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Location.
R. R. Penn & Shell Pet. Corp.'s No. 1 Halamicek, C SE Sec. 93, Blk. D, C.C.S.D.&R.G.N.G. Sur. ..... Drlg. 4,200 ft.
T. P. Coal & Oil Co.'s No. 1 King Ranch Oil & Lignite Co., 2,310 ft. from N and 990 ft. from W, Sec. 28, Blk. 2, M.-K.-T. Sur. ..... Shut down 2,792 ft.; top pay 2,785 ft.

VAL VERDE COUNTY

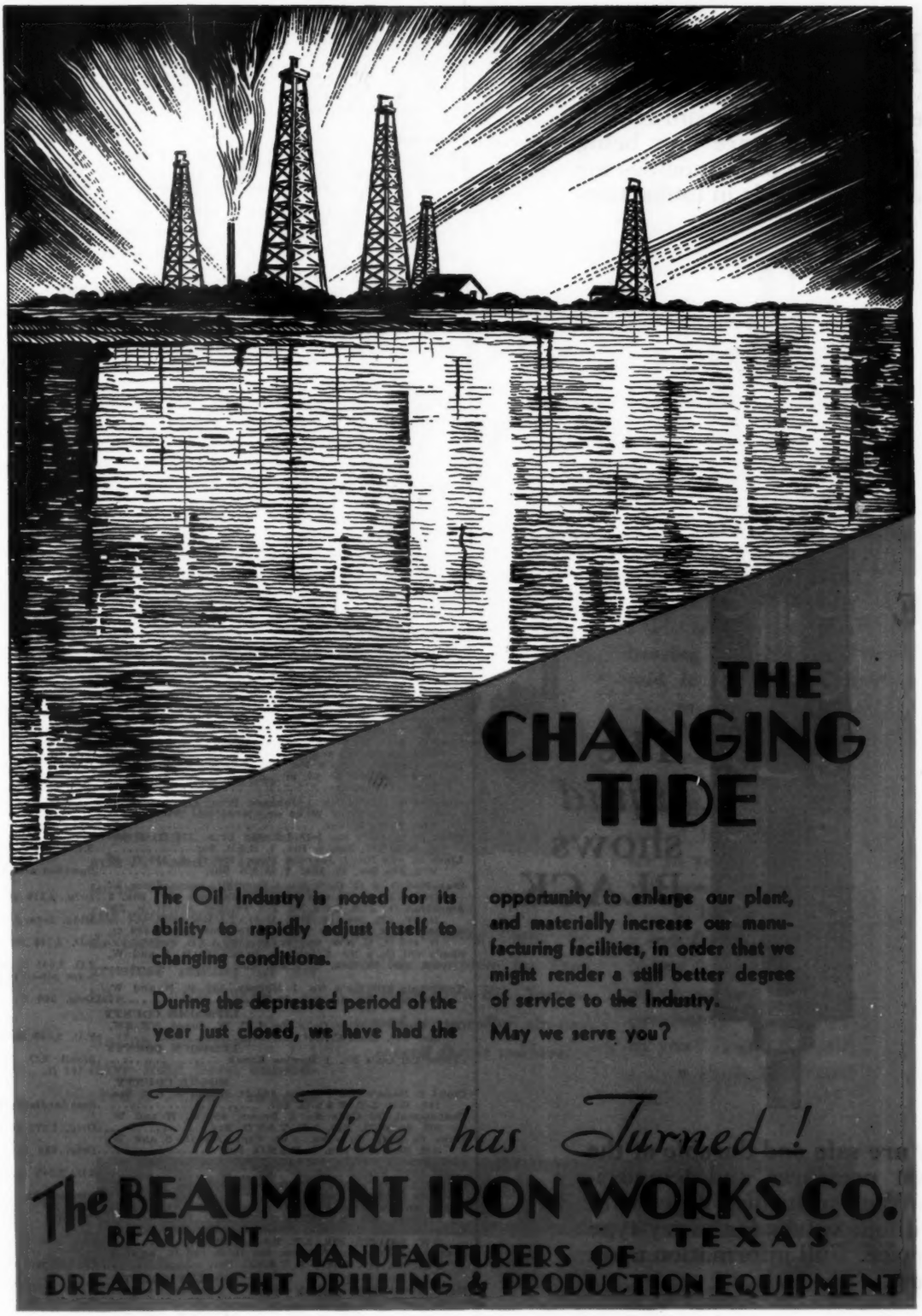
Independent Operators' No. 1 Whitehead, SE SE, Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 5,360 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Waiting for cement to set 6,780 ft.

WARD COUNTY

Bradford et al's No. 1 Carson, 990 ft. from NE and SE Sec. 26, Blk. 5, H.&T.C. Sur. ..... Rig.
Empire Gas & Fuel Co.'s No. 1 John Sealy estate, 330 ft. from S and 1,650 ft. W of NE cor., Sec. 5, Blk. F, T.&M.M. Bros. Sur. ..... Drlg. by tools 2,610 ft.; spraying 25 bbls. oil per day.
Gulf Prod. Co.'s No. 3 Wristen Bros., 220 ft. NE of SW and 220 ft. SE of NW, Sec. 18, Blk. 5, H.&T.C. Sur.... Show gas 1,960-70 ft.; filling up with sulphur water 2,520-77 ft.; salt water 2,515 ft.; plugged back to 2,477 ft.
Gulf Prod. Co.'s No. 16 O'Brien, 2,310 ft. from S and 990 ft. E, Sec. 16, Blk. F, L.M.&W.B.&A. Sur. ..... Shut down 2,406 ft.; set 8-in. casing.
Kugle et al's No. 1 Wallace, 330 ft. from SE and 1,263 ft. from SW, Sec. 19, Blk. 34, H.&T.C. Sur. ..... Shut down 2,456 ft.
Magnolia Pet. Co.'s No. 1 Sealy (Atlantic), 2,130 ft. from S and 1,650 ft. from E, Sec. 45, Blk. F, G.M.M.B.&A. Sur. ..... Shut down 850 ft.
R. F. Owens' No. 1 Johnson, 100 ft. from NE and 1,100 ft. from SE of Sec. 8, Blk. 33, H.&T.C. Sur. ..... Drlg. 2,000 ft.
Prairie O. & G. Co.'s No. 1 Hill, 330 ft. from NE and NW, Sec. 30, Blk. B-29, P.S.L. Sur. ..... Drlg. 1,255 ft.
Rickford & Smith's No. 1 Johnson, 120 ft. NE and 175 ft. SE of N cor., Sec. 7, Blk. 32, H.&T.C. Sur., but located in Sec. 11, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,110 ft.
Paul Ryan's No. 1 Allen, 998 ft. from NW and 3,624 ft. from NE, Sec. 11, Blk. 5, H.&T.C. Sur. ..... Running 8¼-in. casing 800 ft.
Shipley et al's No. 1 Hayslett, 2,490 ft. from SE and 1,980 ft. from SW, Sec. 17, Blk. 5, H.&T.C. Sur. ..... Drlg. plug 760 ft.
California Co. et al's No. 1 Lanham, 990 ft. from NE and SE, Sec. 35, Blk. 34, H.&T.C. Sur. ..... Building rig.
California Co.'s No. 1 Gordon, 330 ft. from NE and SE, Sec. 6, Blk. 34, H.&T.C. Sur. ..... Rig.
Shipley et al's No. 1 Monroe, 330 ft. SE SW Sec. 3, Blk. 1 ..... Fishing 3,780 ft.
California Co.'s No. 1 Allen, 2,310 ft. from NE and 330 ft. from SE, Sec. 30, Blk. 34, H.&T.C. Sur. ..... Shot 100 qts. 2,640-80 ft.; no results; cleaning out 55 ft. off bottom; total depth 2,710 ft.

WINKLER COUNTY

Magnolia Pet. Co.'s No. 1 Bashara, 1,650 ft. from S and 2,310 ft. from W, Sec. 17, Blk. B-3, P.S.L. Sur. ..... Drlg. 2,750 ft.
Magnolia Pet. Co.'s No. 1 Walton, 2,310 ft. from N and W Sec. 16, Blk. 77, P.S.L. Sur. ..... Drlg. 1,960 ft.
Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Shut down 4,639 ft.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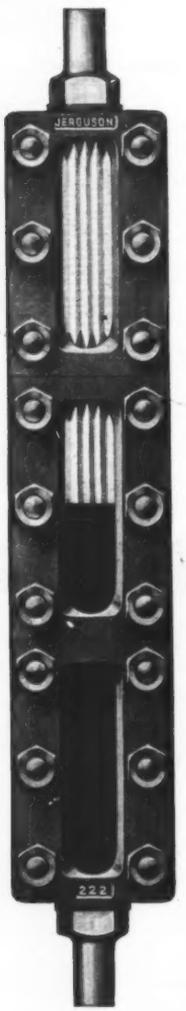

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JERGUSON GAGE & VALVE CO.

MYSTIC AVE. AND NORTHERN ARTERY
SOMERVILLE, MASS.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 64)

Beck's No. 1 Sullivan, 330 ft. N and E, W½ NW, Sec. 135, Blk. 3, I.&G.N. Sur. ..... Estimated 30,000,000 ft. gas 2,520-2,650 ft; 5,000,000 ft. gas 2,845-50 ft; drlg. 2,995 ft.

Boyles et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... Spudded and S.D.

Brown et al's No. 1 Duncan, 330 ft. S and E, NW, Sec. 93, Blk. 3, I.&G.N. Sur. ..... S.D. 740 ft.

Danciger O. & R. Co.'s No. 1 Sullivan, 231 ft. N, 324 ft. W, of E 160 ac. of S 264 ac., N½, Sec. 136, Blk. 3, H.&G.N. Sur. ..... Drlg. 2,500 ft.

Danciger O. & R. Co.'s No. 1 Barnett, 231 ft. S, 330 ft. W, E½ of N 56 ac., Sec. 136, Blk. 3, I.&G.N. Sur. ... Drlg. 2,925 ft.

Danciger O. & R. Co.'s No. 2 Sullivan, 231 ft. N, 884 ft. W of E 160 ac. of S 264 ac., N½, Sec. 136, Blk. 3, H.&G.N. Sur. ..... Estimated 6,000,000 ft. gas 2,997-3,065 ft; S.O. 3,155-69 ft; T.D. 3,351 ft; swbng. 30 bbls. a day from lime pay 3,155-69 ft.

Empire G. & F. Co.'s No. 3 Wall, 990 ft. S and W, NW, Sec. 161, Blk. 3, I.&G.N. Sur. ..... Rig.

Empire G. & F. Co.'s No. 1 Ruscoe, 1,320 ft. N, 660 ft. E, W½ SE, Sec. 111, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,600 ft; 8-in. csg. set 2,600 ft.

Hurst et al's No. 1 Ayres, 330 ft. S and E, Sec. 76, Blk. 3, I.&G.N. Sur. ..... Rotary rig.

Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. B-2, H.&G.N. Sur. ..... S.D. 2,770 ft.

Kewanee O. & G. Co.'s No. 1-D Morse, 330 ft. N and W, S½ SW, Sec. 16, Blk. A-9, H.&G.N. Sur. ..... Rotary rig.

Kewanee O. & G. Co.'s No. 1-E Morse, 330 ft. N and E, S½ SE, Sec. 15, Blk. 9-A, H.&G.N. Sur. ..... Rigging up.

Kewanee O. & G. Co.'s No. 3 Smith, 330 ft. N and W, Sec. 149, Blk. 3, I.&G.N. Sur. ..... Rig (rotary).

Magnolia Pet. Co.'s No. 1 Barrett, 330 ft. S and E, NE, Sec. 112, Blk. 3, I.&G.N. Sur. ..... Location.

Magnolia Pet. Co.'s No. 2 Heitholt, 150 ft. S, 1,156 ft. W, SE, Sec. 152, Blk. 3, I.&G.N. Sur. ..... 4,000,000 ft. gas 2,720-45 ft; T.D. 2,925 ft; set 6-in. csg; standardizing.

Magnolia Pet. Co.'s No. 4 Latham, 300 ft. N, 320 ft. E, Sec. 153, Blk. 3, I.&G.N. Sur ..... Drlg. 1,440 ft.

Magnolia Pet. Co.'s No. 1 Eddington, 330 ft. N, 370 ft. E, NE, Sec. 34, Blk. B-2, H.&G.N. Sur. ..... Set 8-in. csg. 2,625 ft; standardizing.

Magnolia Pet. Co.'s No. 1 Morse, 330 ft. N and W, S½ NE, Sec. 5, Blk. 26, H.&G.N. Sur. ..... T.D. 2,573 ft; shot with 40 qts. from 2,541-73 ft; no results.

McIlroy Oil Co.'s No. 1 Baer, 330 ft. S and W, Sec. 125, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,160 ft.

Nelson et al's No. 1 Crews, 330 ft. S and E, NW, Sec. 12, Blk. 25, H.&G.N. Sur. ..... Fishing for bit; T.D. 2,620 ft.

Operators Royalty & Prod. Co.'s No. 2 Vanniman, 330 ft. S and W, E½ NE, Sec. 175, Blk. 3, I.&G.N. Sur. .. Drlg. 2,400 ft.

Phillips Pet. Co.'s No. 2 Barnett, 130 ft. N, 465 ft. W, Sec. 136, Blk. 3, I.&G.N. Sur. ..... S.D. 3,351 ft.

W. A. Scott's No. 1 Cobb, 330 ft. S, 425 ft. W, N½ SE, Sec. 184, Blk. 3, I.&G.N. Sur. ..... Estimated 4,000,000 ft. gas 2,875 ft; drlg. 3,260 ft.

Southern States Gas Co.'s No. 1 Case, 330 ft. N and W, E½, Sec. 181, Blk. B-2, H.&G.N. Sur. ..... Spudded.

Sullivan & Ochiltree's No. 1-A Morse, 330 ft. S and W, N½ NE, Sec. 15, Blk. A-9, H.&G.N. Sur. ..... Rig.

Warner Oil Co.'s No. 1 Morse, 330 ft. S and W, N½ NW, Sec. 68, Blk. 25, H.&G.N. Sur. ..... Cellar.

HUTCHINSON COUNTY

Canadian River Gas Co.'s No. 1 Dunnaway, 330 ft. N, 1,320 ft. E, NE NE, Sec. 5, Blk. Y-2, T.T. Sur. ..... Bldg. rig to deepen from 1,550 ft.

Continental Oil Co.'s No. 1 Moore, 990 ft. S, 2,276 ft. W, S½ SW, Sec. 21, Blk. M-21, T.C. Sur. ..... Rigging up.

Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. ... Drlg. 890 ft.

Dixon Creek Oil Co.'s No. 1-F Johnson Bros., 330 ft. N and E of W 67 ac., SW, Sec. 15, Blk. XO3, H.&O.B. Sur. ..... Drlg. 2,330 ft.

Huber Prod. Co.'s No. 1 Johnson Bros. (Premier), 330 ft. N and E of W 60 ac., N 80 ac., NW, Sec. 3, Blk. Y, A.&B. Sur. ..... Rotary rig.

Liner Drlg. Co.'s No. 1-D Johnson Bros., 330 ft. N and E, W½ SW, Sec. 6, Blk. 1, B.&B. Sur. ..... S.D. 2,773 ft.

Liner et al's No. 1 Johnson Bros., 990 ft. S, 330 ft. E, W½ SE, Sec. 29, Blk. Y, A.&B. Sur. ..... Spudded and S.D.

Stanolind O. & G. Co.'s No. 1 Barnhill, common cor. of tracts 28, 29, 30 and 31 of G. Martinez Sur., Blk. 2.. Drlg. 2,810 ft.

Stanolind O. & G. Co.'s No. 2-A Pitcher, 990 ft. S. 330 ft. W. SE. Sec. 19, Blk. M-21, T.C.R.R. Sur. ..... Bldg. rotary rig.

Sinclair O. & G. Co.'s No. 1-A Johnson Bros., 330 ft. N, 430 ft. E, NW, Sec. 32, Blk. Y, A.&B. Sur. ..... S.D. 3,145 ft.

Skelly Oil Co.'s No. 1 Johnson Bros., 660 ft. S and W, SE, Sec. 30, Blk. Y, A.&B. Sur. ..... S.O. 3,065 ft. and 3,108-10 ft; S.D. for pipe line connection 3,110 ft.

Texilvania Oil Co.'s No. 1 Harvey, 330 ft. N and W, SW NW, Sec. 14, Blk. M-21 ..... Drlg. 990 ft.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft; S.D. 4,167 ft.

MOORE COUNTY

Cloud & Dana's No. 1 Jones, 330 ft. N and E, SW, Sec. 169, Blk. 3-T, T.&N.O. Sur. ..... Standardizing 3,560 ft.

Continental Oil Co.'s No. 1 Brown, 990 ft. N and W, SE, Sec. 172, Blk. 3-T, T.&N.O. Sur. ..... Drlg. 1,975 ft.

Dana O. & G. Co.'s No. 1 R. Utey, 330 ft. S and W, NE, Sec. 135, Blk. 3, T.&N.O. Sur. ..... Drlg. 980 ft.

Gulf Prod. Co.'s No. 1 Dare, C SE, Sec. 312, Blk. 44, H.&T.C. Sur. ..... S.D. 3,305 ft; 10,000,000 ft. gas.

Gulf Prod. Co.'s No. 2 Kilgore, C SE, Sec. 29, Blk. P.Mc., E.L.R.R. Sur. ..... S.D. 668 ft.

Sunray Oil Co.'s No. 1 Rupert, 660 ft. N, 330 ft. E, NW, Sec. 191, Blk. 3-T, T.&N.O. Sur. ..... Cellar.

Plains Holding Co.'s No. 1 Bridges, 1,690 ft. S and E, NW, Sec. 252, Blk. 3-T, T.&N.O. Sur. ..... Drlg. 660 ft.

Sunray Oil Co.'s No. 2 Jones, 330 ft. S, 990 ft. E, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... Spudded and S.D.

Chambers et al's No. 1 Herring, CNL, Sec. 29, Blk. S, G.C.&S.F. Sur. ..... S.D. 680 ft.

POTTER COUNTY

Canadian River Gas Co.'s No. 1-B Crawford ..... Drlg. 1,790 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. S and E, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 1,800 ft; set 10-in. csg; S.D.

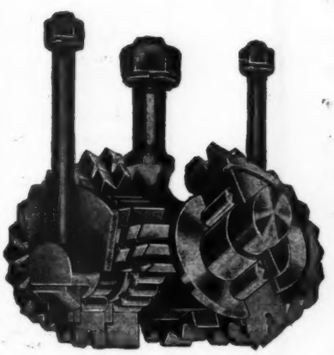
Reno Oil Co. et al's No. 1 D'spain, 330 ft. N and W, NE, Sec. 52, Blk. 24, H.&G.N. Sur. ..... Rig.

Vollmert's No. 1 Porter, 330 ft. S and E, NE, Sec. 15, Blk. 27, H.&G.N. Sur. ..... Rig.

And now comes a ROLLER · BEARING ROCK BIT

Designed . . . built . . . and proven . . . through exhaustive field tests . . . under varying conditions . . . at varying depths . . . in varying formations . . . in the Gulf Coast . . . in Oklahoma . . . in West Texas . . . in New Mexico . . . in California . . . in Wyoming . . . in Canada . . . and in Iraq . . . to be the most successful combatant . . . yet devised . . . against the greatest enemy of all bits . . . FRICTION.

Roller bearings . . . have long been considered . . . the nearest possible approach . . . to the perfect bearing . . . and the perfect bearing . . . is a *frictionless* bearing . . . But they said *It can't be done . . . in a rock bit* . . . and then REED did it . . . and the proof that it has been done successfully . . . is contained in this guarantee to you . . . this bit will make more hole . . . in less time . . . at a less footage cost . . . in any formation . . . in which any rock bit has previously been used by you . . . and it is still . . . a slush lubricated bit.



Roller Bearing Cutter Assembly complete for Type 31 Reed Rock Bit. Note recessed cross roller pin and special thrust washers.

REED ROLLER BIT CO.

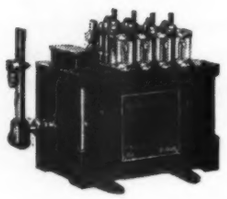
HOUSTON TEXAS — NEW YORK CITY NEW YORK — OKLAHOMA CITY OKLAHOMA — LOS ANGELES CALIFORNIA

OVER THIRTY YEARS AGO

McCord started building lubricators. Pioneers they were, designing—developing—improving, so these small but highly important pieces of machinery would fulfil all the stringent requirements thrust upon them.

Today McCord is still the pioneer, still designing—still developing—still improving, maintaining that well known synonym "Standard of the Oil Fields." In every lubricator you will find all the experience gained in these thirty years. They are at once, accurate, positive and absolutely dependable—what more could be desired?

Specify them on your next new equipment or for replacement on present machinery.



McCORD
RADIATOR & MFG. CO.
(LUBRICATOR DIVISION)
DETROIT MICHIGAN

GULF COAST FIELDS AND WILDCATS

(Continued from Page 50)

John Deering's No. 1 Graff (workover)... Total depth 5,634 ft.; sidetracked to sand and shale showing oil 4,427 ft.; set 138 ft. 4½-in. screen; comp. flowing 450 bbls. oil.
M. LaRue's No. 1 Tuffly, northwest... Gumbo 1,405 ft.; shut down.
Southern Coastal Oil Co.'s No. 2 Perkins... Standing sand and shale 2,860 ft.
Sun Oil Co.'s No. 19 Bender... Drlg. shale 4,791 ft.
Sun Oil Co.'s No. 1 Beck, west flank... Drlg. sand 2,986 ft.
Trapshooter Oil Co.'s No. 3 Rosenbaum... Running tubing 4,067 ft.
Trapshooter Oil Co.'s No. 10 Nell, northwest... Salt 1,806 ft.; standing.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Prod. Co.'s No. 2 Manchester Corp. ... Drlg. shale and lime 4,323 ft.
Gulf Prod. Co.'s No. 23 Taylor, east side, James Hamilton Sur. No. 52 (workover) ... Fishing screen to deepen; total depth 4,857 ft.
Kipley Oil Co.'s No. 2 Prudential, northwest side... Rig.
Navarro Oil Co.'s No. 2 Perry... Drlg. sand and lime 3,100 ft.
Rio Bravo Oil Co.'s No. 10-D Settegast (workover)... Drlg. hard sand 4,147 ft.

BIG CREEK—FORT BEND COUNTY

Gulf Prod. Co.'s No. 61 Davis... Sand and shale 4,156 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 5 Lost Lake... Drlg. granular anhydrite 6,607 ft.; top 6,591 ft.; salt 6,280-6,305 ft.

SPINDLETOP—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 53 McFaddin (workover)... Total depth 5,225 ft.; sidetracked at 2,728 ft. and drilled to sand at 2,943 ft.; set 1 jt. 3-in. screen; tested salt water and abandoned.
Yount Lee Oil Co.'s No. 122 McFaddin (workover)... Total depth 4,753 ft.; sidetracked to oil sand 4,593-4,623 ft.; set 30 ft. 5-in. screen; comp. 20 bbls. net oil.
Yount Lee Oil Co.'s No. 145 McFaddin... Drlg. shale and lime 5,422 ft.

NORTH DAYTON—LIBERTY COUNTY

Harrison Oil Co.'s No. 4 Quintette (workover)... Total depth 6,077 ft. in salt; sidetracked and drlg. sticky shale 5,646 ft.

HIGH ISLAND—GALVESTON COUNTY

Marrs McLean's No. 12 Cade (workover)... Total depth 4,552 ft.; twisted off; sidetracking in sand 3,381 ft.
Marrs McLean's No. 20 Cade... Rig standing.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 28 Moore... Drlg. gumbo and lime 1,562 ft.

HULL—LIBERTY COUNTY

The Texas Company's No. 4 Barrow... Total depth 4,317 ft.; reaming.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 3 Elman... Drlg. sand 1,553 ft.
Sun Oil Co.'s No. 4 Janner... Salt 3,865-5,500 ft.; abandoned.
Sun Oil Co.'s No. 1 Freeman... Total depth 3,638 ft. in salt; plugged to sand 1,990 ft.; tested salt water; abandoned.
Sun Oil Co.'s No. 2 Marcus, J. F. Perry Sur., 300 ft from N line and 203 ft. from E line of tract... Drlg. sandy shale 935 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds' No. 18 Esperson... Shale and lime 2,292 ft.
Cranfill-Reynolds' No. 8 Moores Bluff... Drlg. gumbo 724 ft.
Cranfill-Reynolds' No. 7 Davis, David Kokernut Sur., 100 ft. S No. 4 ... Derrick.
Cranfill-Reynolds Oil Co.'s No. 1-C Kirby fee... Drlg. sand and shale 4,612 ft.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 1 Ezzel... Set 1 jt. screen 7,095 ft. and tested salt water; temporarily abandoned.
Gulf Prod. Co.'s No. 11 Boyt... Set 1 jt. screen 3,896 ft.; comp flowing 600 bbls. daily on ½-in. choke.

BOLING—WHARTON COUNTY

C. S. Thomas' No.1 Volney... Standing shale 535 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 110-A Cotton ... Spudded.

MOSS BLUFF—LIBERTY AND CHAMBERS COUNTIES

Gulf Production Co.'s No. 3 McFaddin, east flank... Drlg. shale and lime 5,212 ft.
Humble Oil & Ref. Co.'s No. 2 Breeding, northwest flank... Rigging up.
Humble Oil & Ref. Co.'s No. 7 Sterling, east flank... Drlg. sticky shale 3,289 ft.
Texas Gulf Sulphur Co.'s No. 1 Carter (sulphur test)... Abandoned in salt 1,812 ft.
Humble Oil & Ref. Co.'s No. 2 Sergeant, east flank... Rig.
Shell Petroleum Corp.'s No. 2 Herff, southeast flank... Drlg. sticky shale with streaks of shale and lime 6,720 ft.
Texas Gulf Sulphur Co.'s No. 2 W. A. Carter, B. M. Spinks Sur., 1,483 ft. from N line and 50 ft. from E line of tract ... Rig.

ORANGE—ORANGE COUNTY

Sinclair Oil & Gas Co.'s No. 5 Granger ... Drlg. hard sand 3,605 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 14 Pratt-Hewitt-Rooke... Cored salt water sand 3,896-3,911 ft.; shut down.
Houston Oil Co.'s No. 2 Rea (workover)... Total depth 3,683 ft.; plugged to 3,669 ft.; set 10 ft. screen; putting on gas lift.
Houston Oil Co.'s No. 4 Mrs. M. H. Ryals... Coring sand and shale showing oil 3,660 ft.
Houston Oil Co.'s No. 13 F. V. W. Heard... Oil sand 3,670-78 ft.; swinging 6⅝-in. csg. 3,659 ft.
Houston Oil Co.'s No. 1 Rooke... Sand 6,197-6,205 ft.; set 22 ft. screen; swabbed some oil; shut down.
Houston Oil Co.'s No. 1 Doughty... Sand 6,452-65 ft.; set 22 ft. screen; tested salt water; pulled screen and cmtd. bottom of hole.
Houston Oil Co.'s No. 1 O'Connor... Total depth 5,913 ft.; plugged to 5,901 ft.; temporarily abd.
Houston Oil Co.'s No. 3 Rose Lambert... Rigging up.
Houston Oil Co.'s No. 1 O'Brien (D.D.), Blk. 5... Rig up to deepen 5,427 ft.
Ed. Jones' No. 1 Kelly, Blk. 106... Oil sand 6,451-54 ft.; set 12 ft. screen; comp. flowing 300 bbls. pipe line oil on ¼ and 3/16-in. chokes, 2,100 lbs. pressure.
Ed Jones' No. 3 Mitchell, 200 ft. SW Mission River and 250 ft. SE of road in Blk. 13 ... Drlg. shale 4,784 ft.
Luling Oil & Gas Co.'s No. 1 City, Blk. 86... Drlg. shale 1,425 ft.
Luling Oil & Gas Co.'s No. 1 City, Blk. 105... Oil sand 6,451-59 ft.; cmtd. 6⅝-in. csg. 6,451 ft.
Moody-Seagraves-Karona's No. 1 F. Hayser... Salt water sand 6,352-82 ft.; shut down.
Moody-Seagraves Prod. Co.'s No. 6 Morgan-O'Connor... Drlg. sticky shale and lime 4,843 ft.
Moody-Seagraves Prod. Co.'s No. 7 O'Connor... Drlg. gumbo and lime 2,606 ft.
Moody-Seagraves-Phillips' No. 2-A J. F. B. Heard... Rig.
Moody-Seagraves and Phillips Pet. Co.'s No. 3-B J. F. B. Heard ... Set 19 ft. screen and 24 ft. blank 3,661 ft.; comp. 160 bbls. oil 60% water daily.
Moody-Seagraves and Phillips Petroleum Co.'s No. 2 Mercy Academy, 167 ft. from N. line and 666 ft. from E line of tract... Drlg. sand and lime 865 ft.
Moody-Seagraves' No. 1-B O'Brien... Cmtd. 8¼-in. csg. 5,808 ft.
Moody-Seagraves' No. 1 Shelly ... Rigging up.
Moody-Seagraves Prod. Co.'s No. 1 Strauch, Blk. 64 (workover) ... Oil sand 6,443-55 ft.; cmtd. 5 3/16-in. csg. 6,444 ft.

These facilities mean FINE WORK—FAST DELIVERY

THE Limbert pipe bending shop, with abundant capacity, makes prompt delivery certain. But more than mere bigness, this unusual plant incorporates the most highly developed methods for accurate quality work. The equipment and methods used here are the result of a full third of a century of pipe fabricating experience.

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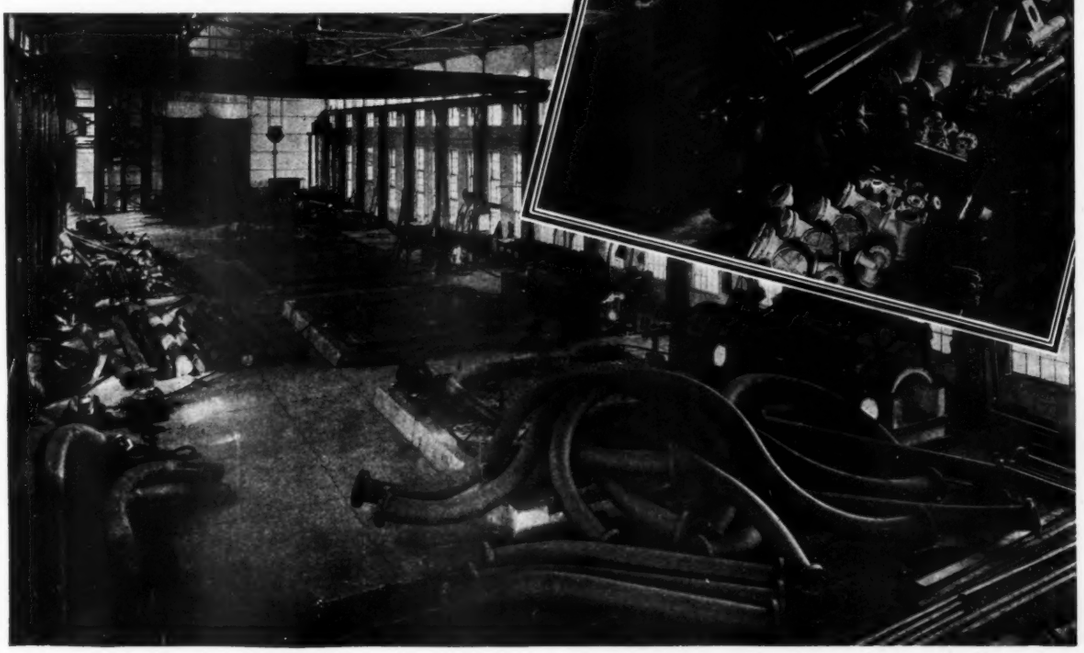

T. P. Morgan's No. 1-B St. John heirs, 200 ft. from N line and 1,558 ft. from E line of lease — Drlg. hard sandy lime 4,485 ft.
Saxet Oil Co.'s No. 6-A W. Heard (workover) — Sand 3,676-84 ft.; set 13 ft. screen and 57 ft. 3-in. liner; flowing 670 bbls. pipe line oil, 680 lbs. W.P. on ⅝-in. choke on tubing.
Saxet Oil Co.'s No. 1 L. E. Johnson, Blk. 11 — Location.
Sun Oil Co.'s No. 3 Rea — Temporarily abandoned 3,663 ft.
L. L. Smith's No. 2 Rogers, James Power Sur. — Salt water sand 5,091 ft.; temporarily abandoned.
Taylor, Rutherford & Taylor's No. 1 Rogers heirs, James Powers Sur. — Shale 3,726 ft.; temporarily abd.
United Prod. Corp.'s No. 3 Fox (workover) — Drlg. sticky shale and lime 5,105 ft.
United Prod. Corp.'s (Union) No. 11 Fannie Heard — Drlg. hard shale and lime 5,319 ft.
United Prod. Corp.'s (Union) No. 12 Fannie Heard — Location.
United Prod. Corp.'s (Union) No. 2 Moss-Powers, Blk 109 — Derrick.
United Prod. Corp.'s (Union) No. 5 O'Brien (workover) — Oil sand 6,451-59 ft.; set 18 ft. screen; comp. flowing 525 bbls. pipe line oil, 1,500 lbs. pressure on csg. and tubing, ¼-in. choke.
United Prod. Corp.'s (Union) No. 7 O'Brien, Blk. 85 — Oil sand 6,452-57 ft.; cmtd. 5 3/16-in. csg. 6,450 ft.; drlg. plug.
United Prod. Corp.'s (Union) No. 8 O'Brien — Oil sand 6,448 ft.; cmtd. 5 3/16-in. csg. 6,448 ft.
United Production Corp.'s No. 10 O'Brien, 150 ft. E of E line of Blk. 106, Refugio Townsite, and 428 ft. N of Refugio Town Tract Sur. — Location.
United Production Corp.'s No. 6 Power, C, Blk. 83, Refugio Townsite — Location.
United Prod. Corp.'s (Union) No. 8 Powers, Blk. 83 — Oil sand 6,448-57 ft.; cmtd. 5 3/16-in. csg. 6,448 ft.
United Prod. Corp.'s (Union) No. 6 Nancy J. Ryals — Oil sand 3,644-54 ft.; cmtd. 8¼-in. csg. 3,643 ft.; rebuilding derrick.
United Prod. Corp.'s (Union) No. 2-A Rose Lambert, 200 ft. out of SE cor., Blk. 1, of town tract — Location.
United Prod. Corp.'s (Union) No. 1 Shelton — Oil sand 6,443-47 ft.; cmtd. 6⅝-in. csg. 6,443 ft.
United Prod. Corp.'s (Union) No. 5 Mitchell — Oil sand 6,431-46 ft.; set 18 ft. screen; comp. flowing 750 bbls. pipe line oil, 1,800 lbs. pressure on csg. and tubing, ¼-in. choke.

SOUTH LOUISIANA FIELDS

LOCKPORT—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Martha Moss — Drlg. gumbo 1,500 ft.
Union Sulphur Co.'s No. 2 H. J. Moss (workover) — Drlg. shale 5,367 ft.
Vacuum Oil Co.'s No. 9 Bordages — Drlg. sand 4,297 ft.
Vacuum Oil Co.'s No. 8 Farquahar — Oil sand 5,365 ft.; cmtd. 9⅝-in. csg. 5,340 ft.; drilled plug to test.
Vacuum Oil Co.'s No. 12 Miller (workover) — Total depth 4,421 ft.; sidetracked to oil sand 3,711 ft.; cmtd. 7-in. csg. 3,685 ft.
Vacuum Oil Co.'s No. 31 Miller — Oil sand 3,872 ft.; cmtd. 9⅝-in. csg.; drilled plug to test.
Vacuum Oil Co.'s No. 7 State, 319 ft. N and 260 ft. W. SE cor. NE, Section 8-10s-9w — Driving piling for derrick.

EDGERLY—CALCASIEU PARISH

Associated Oil Co.'s No. 5 Paraffine — Drlg. sand and shale 3,554 ft.
Rex Petroleum Co.'s No. 8 Hunter — Total depth 3,500 ft. in oil sand; set 4½-in. liner 3,460 ft.
Rex Petroleum Corp.'s No. 2 Prairie Narroni, Sec. 21-9s-11w, 365 ft. from S line and 50 ft. from E line of lease — Derrick.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 9 Valery — Total depth 3,137 ft.; plugged to 2,148 ft.; oil sand 2,131-38 ft.; set 1 jt. 3-in. screen; swabbed salt water.
R. E. Seiss' No. 2 J. M. Vincent — Shut down 510 ft.
The Texas Company's No. 8 State — Derrick.
Yount Lee Oil Co.'s No. 34 State — Location.
Yount Lee Oil Co.'s No. 36 State — Location.
Yount Lee Oil Co.'s No. 37 State — Location.
Yount Lee Oil Co.'s No. 38 State — Location.
Yount Lee Oil Co.'s No. 39 State — Location.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 9 Housierre Latrielle — Sand showing gas and oil 8,647-53 ft.; drill stem stuck.

VINTON—CALCASIEU PARISH

Gulf Refining Co.'s No. 2 Gardiner, 304 ft. N and 44 ft. E of SW cor. SE NE, Sec. 33-10s-12w (workover) — Deepened from 3,571 ft. to 3,974 ft.; abandoned in salt.
Gulf Refining Co.'s No. 70 G. & N. Gray (workover) — Drlg. sand and lime 3,126 ft.
Vinton Pet. Co. (Lucky Ten) No. 1 Lizzo — Total depth 3,326 ft.; set 16 ft. of 3-in. screen 3,104 ft.; bailing.
Vinton Pet. Co.'s No. 10 Matilda Gray (workover) — Drlg. sand 3,737 ft.
Wilson-Broach's No. 7 Wilson — Set 57 ft. 4½-in. screen 3,347 ft.; tested salt water.

BAYOU BOUILLON—ST. MARTIN PARISH

Humble Oil & Ref. Co.'s No. 1 Woodyard Lake — Total depth 6,061 ft.; sidetracking hard sandy lime 5,286 ft.
Humble Oil & Ref. Co.'s No. 4 State — Total depth 4,477 ft.; sidetracking in hard sand 4,250 ft.

SWEET LAKE—CAMERON PARISH

Magnolia Pet. Co.'s No. 2 Sweet Lake, Sec. 5-13s-7w — Building derrick.
Pure Oil Co.'s No. 10 Yount Lee — Drlg. sticky shale and lime 6,180 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 4-A Hoskins — Sand showing oil 3,658-96 ft.; set 1 jt. screen; swabbing.
The Texas Company's No. 9 Botney Bay — Scudded and standing.

STARKS—CALCASIEU PARISH

Gulf Ref. Co.'s No. 26 Latcher-Moore — Cap rock 1,204-05 ft.; comp. flowing 600 bbls.

SORRENTO—ASCENSION PARISH

Gulf Refining Co.'s No. 19 United Land Co. — Rigging up.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 749 fee (workover) — Drlg. sand 4,248 ft.
Union Sulphur Co.'s No. 762 fee (workover) — Drlg. sand 5,369 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Arkansas Natural Gas Co.'s No. 1 Machemehl — Water sand 5,005 ft.; abandoned.
Empire Gas & Fuel Co.'s No. 1 Kuntze, San Felipe — Drlg. shale and lime 5,860 ft.
O'Hara et al's No. 1 Schrader — Shut down 3,342 ft.

BRAZORIA COUNTY

The Texas Company's No. 1 Ewin, Harvey Little Sur. — Total depth 7,584 ft.; sidetracking sand and shale 7,148 ft.
Mills Bennett Prod. Co.'s No. 3 Allen, Allen — Drlg. salt 1,965 ft.
Mills Bennett Prod. Co.'s No. 2 Reece, Allen — Drlg. sand and shale 3,654 ft.
Mills Bennett Prod. Co.'s No. 2 Random, Allen — Drlg. hard sand 4,227 ft.
Faust et al's No. 5 Faust — Drlg. sticky shale 6,112 ft.
Freeport Sulphur Co.'s No. 2001 fee, Bryan Heights — Drlg. hard sand 4,926 ft.
Layne et al's No. 7-A Wisdom, Damon Mound — Drlg. shale 3,120 ft.
Amerada Pet. Corp.'s (Rycade) No. 2 Seaburn, Stratton Ridge — Drlg. shale 6,112 ft.
Steel & Strickland's No. 1 Lockbridge — Spudded and shut down.
United Oil Syndicate's No. 1 Speer, A. A. Talmadge Sur. — Shut down 732 ft.

BURLESON COUNTY

Mid-South Oil Co.'s No. 1 Duckworth — Tested brackish water 2,601 ft.; shut down.

CALHOUN COUNTY

The Texas Company's No. 1 Smith, J. Timmons Sur. Will Monsin and Driscoll Sub. — Spudded.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence — Shut down 5,020 ft.

COLORADO COUNTY

A. H. Eaton et al's No. 1 A. R. Sureck — Shut down in shale 1,220 ft.

FORT BEND COUNTY

Long Point Oil Co.'s No. 1 Texas-Gulf fee, H.&T.C. Sur. — Reset screen 633 ft.; standing.

GRIMES COUNTY

Deerings & Noble's No. 1 Templeton, 6 miles south of Navasota — Shale 3,680 ft.; reaming.

HARDIN COUNTY

D. O. Speight's No. 1 fee, near Batson — Shut down in gumbo 3,350 ft.

HARRIS COUNTY

Gulf States Oil Co.'s No. 1 Angsperger — Shut down 3,928 ft.
Humble Oil & Ref. Co.'s No. 1 Gehring, Mykawa — Sand 4,873 ft.; 30 ft. 7-in. (O.D.) screen set with csg. 4,870 ft.; swabbing.
Humble Oil & Ref. Co.'s No. 4 Minnetex, Mykawa — Total depth 5,707 ft.; reaming.
Humble Oil & Ref. Co.'s No. 5 Minnetex, Mykawa, 150 ft. from S line and 200 ft. from W line, Lot 251, Wm. Lovett Sur. — Location.
Midway Oil & Royalty Co.'s No. 1 Warren, Hockley, 2,230 ft. from S line and 1,575 ft. from W line of Sur. — Location.
Sloane Prospecting Co.'s No. 1 Ulrich, Cedar Bayou — Drlg. shale 4,200 ft.

JACKSON COUNTY

Chicago-Gulf Co.'s No. 1 Rogers (workover) — Rig up to deepen 3,662 ft.
Warner-Quinlan's No. 1 Hungerford, Henry Smith Sur. — Drlg. gumbo 3,428 ft.

JEFFERSON COUNTY

Humble Oil & Ref. Co.'s No. 1 McFaddin, T.&N.O. Sur. 234 — Drlg. gumbo 3,468 ft.
Keith et al's No. 1 Reed-Hankamer — Sand showing oil 2,972-74 ft.; trying to make drill stem test.
The Texas Company's No. 4 Pipkin, Big Hill — Total depth 4,123 ft.; sidetracking in sand rock 3,615 ft.

LIBERTY COUNTY

Hamm et al's No. 1 Harvard, Davis Hill — Gumbo 1,015 ft.; shut down.
J. R. Ingram's No. 1 Hornbeck, Clayton, Harper Sur. — No report.
Tucker et al's No. 1 Bell, H.&T.C. Sur. No. 4 — Gumbo 560 ft.; shut down.

MATAGORDA COUNTY

H. C. Cockburn's No. 2 Hawkins, Shepherds Mott — Total depth 5,244 ft.; sidetracking in sand and shale 5,170 ft.
Empire Gas & Fuel Co.'s No. 1 Baker, Citrus Grove — Total depth 6,295 ft.; trying to sidetrack screen.

MONTGOMERY COUNTY

Lake Creek Oil Co.'s No. 1 Hunt, south of Conroe — Shut down 678 ft.; gumbo.
Price & Whitehead's No. 2 Guerges — Shut down 2,956 ft.

NACOGDOCHES COUNTY

E. L. Burk et al's No. 1 Latimer, Jose De Los Santos Sur. — Shut down 4,204 ft.

ORANGE COUNTY

Gulf Production Co.'s No. 1 Miller Vidor Lbr. Co., E. Lewis Sur. No. 385 — Drlg. gumbo 4,305 ft.
Crew Oil Co.'s No. 1 Mansfield — Sand showing oil 675-700 ft.; drill stem test.

SAN JACINTO COUNTY

E. P. Edwards et al's No. 1 Bennett, northwest of Cold Springs — Spudded.

VICTORIA COUNTY

Newton et al's No. 1 West — Shut down 1,550 ft.
The Texas Company's No. 2 McFaddin, C. M. B. Hoyd Sur. — Drlg. gumbo 1,137 ft.

WASHINGTON COUNTY

Penn-Tex Oil Co.'s No. 2 Kamas Brenham, S. M. Williams Sur. — Spudded and shut down.
Vegua Oil Co.'s No. 1 P. Graves, S. Clampet Sur. — Derrick.
Oliver Drlg. Co.'s No. 1-A Hahn, J. H. Alcorn Sur. A-3 — Drlg. sand and shale 1,387 ft.

WHARTON COUNTY

Shibe & Gray's (Hearte Oil Co.) No. 1 Brown, El Campo — Total depth 2,814 ft.; tested dry 2,662 ft.; shut down.
H. H. Givans' No. 2 Hudgins — Sand rock 367 ft.; set 6⅝-in. csg. 296 ft.

SOUTH LOUISIANA

CALCASIEU PARISH

Crawford Doyle's No. 1 Johnson, Sec. 23-9s-13w — Shut down 875 ft.
J. O. Davis' No. 1 Industrial, Sec. 29-9s-10w — Set 6⅝-in. csg. with 172 ft. 6⅝-in. screen on bottom, 6,568 ft.; drlg. plug.
Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w — Shut down 3,258 ft.
Dr. Thomas et al's No. 1 John Hewitt — Location.

CAMERON PARISH

Shell Petroleum Corp.'s No. 2 State, Black Bayou — Drlg. sticky shale and lime 3,846 ft.
Shell Petroleum Corp.'s No. 16 Watkins, Black Bayou — Sandy shale showing oil 4,073 ft.; running 9⅝-in. csg. to test.
Vacuum Oil Co.'s No. 2 Cameron Meadows, 3,120 ft. S and 1,900 ft. W from NE cor., Sec. 21-14s-9w (500 ft. S No. 1) — Dredging canal to location.
The Texas Company's No. 7 State, Calcasieu Lake — Location.

IBERIA PARISH

The Texas Company's No. 6 Vermillion Bay — Drlg. rock 2,096 ft.
Jefferson Lake Oil Co.'s No. 10 Lake Peigneur, Jefferson Island — Drlg. hard broken lime 1,839 ft.
Jefferson Lake Oil Co.'s No. 11 Peigneur, Jefferson Island — Driving piling.

IBERVILLE PARISH

Gulf Ref. Co.'s No. 1 Gay, Bayou Choctou — Drlg. hard sand 3,548 ft.
Shell Pet. Corp.'s No. 5 Wilbert, White Castle — Coring blue sandy shale 5,470 ft.
Standard Oil Co.'s No. 7 Wilbert, Bayou Blue — Derrick.
Standard Oil Co.'s No. 8 Wilbert, Bayou Des Glaise — Drlg. sand rock 4,200 ft.
Standard Oil Co.'s No. 9 Wilbert, Bayou Des Glaise — Piling capped.
Standard Oil Co.'s No. 2 Case, Bayou Des Glaise — Location.
Standard Oil Co.'s No. 1 E. B. and S. P. Schwing, Bayou Blue — Hard sand 5,365-69 ft.; testing.
Standard Oil Co.'s No. 1 Baist Cooperage, Bayou Blue — Drlg. sand and gravel 245 ft.

JEFFERSON DAVIS PARISH

H. T. McClain et al's No. 1 Trimble Atterbury, Welsh, Sec. 16-9s-5w — Packed sand 4,179 ft.
A. V. Peters' No. 1 Smith Subd., Welsh, 1,050 ft. N and 180 ft. E. SW cor., Sec. 22-9s-5w — Location.

LA FOURCHE PARISH

The Texas Company's No. 2 Leesville — Drlg. gumbo 1,112 ft.

PLAQUEMINES PARISH

Gulf Ref. Co.'s No. 2-B Buras Levee Board — Cap rock 2,216-17 ft.; lost returns; cmtd. 7-in. csg.
Humble Oil & Ref. Co.'s No. 2 Cockrell-Moran, Lake Grand Ecaille — Drlg. hard sand 4,622 ft.
The Texas Company's No. 4 State, Garden Island — Coring sand 5,406 ft.
The Texas Company's No. 5 State, Garden Island — Location.

ST. JAMES PARISH

Convent Oil Co.'s No. 2 Jacobs, Sec. 28-11s-6e — Tested salt water 1,834 ft.; pulled screen.

ST. MARTIN PARISH

Harrison & Abercrombie's No. 1-A Barras, Sec. 66-11s-6e — Drlg. shale 4,427 ft.
The Texas Company's No. 3 Iberville Land — Drlg. sand and lime 4,808 ft.
The Texas Company's No. 4 St. Martin, Hager — Derrick.
The Texas Company's No. 5 St. Martin, Hager — Drlg. salt 4,327 ft.; top of salt 3,450 ft.

ST. TAMMANY PARISH

Washington-St. Tammany's No. 2 Cossack, Sec. 5-6s-10e — Fishing core barrel 1,970 ft.

TANGIPAHOA PARISH

Joan Development Co.'s No. 1 Lake Superior, Sec. 20-5s-9e, 540 ft. E, 675 ft. N of SW cor. — Shut down 3,016 ft.

TERREBONNE PARISH

United Prod. Corp.'s No. 9 Minor, Houma — Total depth 4,480 ft.; reaming.
The Texas Company's No. 4 State, Caillous Island — Driving piling.
The Texas Company's No. 6 State, Caillous Island — Capping piling.
The Texas Company's No. 1 L.L.&E., Bay St. Elaine — Drlg. hard sand and lime 3,937 ft.
The Texas Company's No. 5 State, Bay St. Elaine — Salt 1,463-1,663 ft.; cmtd. 12¼-in. csg. 954 ft.; abandoned.
The Texas Company's No. 6 State, Bay St. Elaine — Location.

The Texas Company's No. 4 State, Dog Lake..... Location.
The Texas Company's No. 5 State, Four Isle..... Location.
The Texas Company's No. 2 La. L. & E., Bay Junop..... Drlg. shale 6,941 ft.
The Texas Company's No. 3 La. L. & E., Bay Junop..... Location.
The Texas Company's No. 4 La. L. & E., Bay Junop..... Location.
The Texas Company's No. 6 State, Lake Barre..... Location.
The Texas Company's No. 8 State, Lake Barre..... Hard sand rock 4,087 ft.; cmtd. 9⅝-in. csg. 4,080 ft.
The Texas Company's No. 9 State, Lake Barre..... Capping piling.
The Texas Company's No. 5 State, Lake Pelto..... Location.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Southwest, Louisiana Land Co., Gueydan ..... Drlg. hard sand 4,532 ft.

WEST FELICIA PARISH

Putnam Syndicate's No. 1 Como Plantation, Sec. 51-1e-4w. Total depth 3,738 ft.; abandoned.

SOUTHWEST TEXAS PROVEN AREAS

(Continued from Page 48)

Stratton et al's No. 9 Abbott ..... Rigged up.
Vitex Oil Co.'s No. 8 Kilgore, Simon Miller Sur. ..... T. D. 1,735 ft.; waiting on cement.

PETTUS AREA—BEE COUNTY

J. L. Mauldin's No. 1 fee, 1,300 ft. N of S line, 150 ft. E of Medio Creek, Kerr Sur. ..... T. D. 3,808 ft.; coring; show oil and gas.
Houston Oil Co.'s No. 1, Blk. 23 ..... T. D. 3,911 ft.; to be deepened.
Houston Oil Co.'s No. 1, Blk. 33 ..... T. D. 3,914 ft.; to be deepened.
United Prod. Co.'s No. 32 Ray, G. Habbermacker Sur. .. Rigging up.

LASATER POOL—BROOKS COUNTY

Houston Oil Co.'s No. 3 Wormser, Maguella Sur. ..... T. D. 1,330 ft.; drlg.

CARTWRIGHT POOL—LIVE OAK COUNTY

Houston Oil Co.'s No. 3 B. L. and C. C. ..... T. D. 4,200 ft.; drlg.
Houston Oil Co.'s No. 4 B. L. and C. C. ..... T. D. 3,100 ft.; drlg.

AGUA DULCE FIELD—NUECES COUNTY

South Texas Production Co.'s No. 9 Walter, 800 ft. from S line, 460 ft. from E line of Walters tract in Sec. 24 ..... T. D. 1,984 ft.; standing.
Houston Oil Co.'s No. 1-B Ollie Purl ..... T. D. 2,150 ft.; drlg. shale.
Houston Oil Co.'s No. 1 Comstock, Sec. 86, Benton Pasture Sur. ..... T. D. 4,913 ft.; shut in for pipe line.

SAXET FIELD—NUECES COUNTY

O. C. Best et al's No. 1 Boory ..... Derrick.
Houston Oil Co.'s (Andy Bowen) No. 1 Prieur, H. B. Sheppard Sur. ..... T. D. 1,465 ft.; waiting for csg.
Moody-Seagraves Producing Co.'s No. 1 Smith, 450 ft. from N and E line of 120-ac. tract, J. Dunn Sur..... T. D. 4,950 ft.; plugging back to 4,060 ft.
W. L. Pearson Properties' No. 1 Dunn, 300 ft. S of Bay ..... Shut down 2,600 ft.
Saxet Oil Co.'s No. 7 Dunn ..... Location.

PRYOR FIELD—ZAVALA COUNTY

Texas Gas Utilities' No. 4 I. T. Pryor, 600 ft. NE of No. 3. T. D. 700 ft.; set 6⅝-in. csg.

LAREDO DISTRICT

SCHOOLFIELD-O'BYRNE POOL—DUVAL COUNTY

Frasher et al's No. 2 Duval Land Co., G.B.&C.N.G. Sur. No. 135 ..... T. D. 2,250 ft.; coring..

RANDOLPH POOL—JIM HOGG COUNTY

J. W. Pippin's No. 1 Hinnant, 150 ft. each way from SW cor., Blk. 11, Sur. 147 ..... Derrick.

KOHLER POOL—DUVAL COUNTY

Humble Oil & Refining Co.'s No. 50 Kohler, 2,805 ft. from S line, 165 ft. from W line of Sur. 164 ..... T. D. 3,870 ft.; drlg.

COLE POOL—DUVAL COUNTY

Southern Oil Co.'s No. 2 King-Harper, 1,794 ft. E line, 729 ft. N line of Sur. 323 ..... Location.

COLE POOL—WEBB COUNTY

O. W. Killam's No. 3 Cuellar, Cuellar grant..... T. D. 2,022 ft.; drlg.

REISER POOL—WEBB COUNTY

O. W. Killam's No. 1 Johnson, Sur. 1,617 ..... Derrick.

CAROLINA-TEXAS POOL—WEBB COUNTY

George S. Marshall's No. 1 C. W. Webster, 810 ft. from S line, 150 ft. from W line, Sur. 684 ..... T. D. 3,300 ft.; plugging back to 3,078 ft.

CHARCO REDONDO POOL—ZAPATA COUNTY

Midwest Public Utilities' No. 1 Zarza, 450 ft. SW line, 450 ft. SE line, Blk. 33, Pedernal grant ..... T. D. 1,575 ft.; drlg.

JENNINGS-MUCKELROY POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 12 Guiterrez, 750 ft. from NE line, 3,663 ft. from SE line, Share 4, Fansler Partition, Comitas grant ..... T. D. 100 ft.; standing.
Claypool & Nixon's No. 2 Garza, Comitas grant..... T. D. 800 ft.; drlg.
Grim & Yokey's No. 1 P. Santos, Comitas grant..... T. D. 800 ft.; drlg.
J. I. Newton's No. 2 Trevino, Sur. No. 66..... T. D. 1,275 ft.; comp. 35 bbls.
S. T. Phelps' (Blankenship) No. 2 Garza, 425 ft. W line, 425 ft. E line, Blk. 2, Sur. 413 ..... T. D. 1,664 ft.; testing.
S. R. C. Oil Co.'s No. 1 Cuellar, 150 ft. S and W lines, Blk. 16, Sur. 62 ..... Location abandoned.
S. R. C. Oil Co.'s No. 12-A Trevino, Sur. No. 66 ..... T. D. 1,286 ft.; comp. 35 bbls.

CUELLAR POOL—ZAPATA COUNTY

O. W. Killam's No. 40-C Cuellar Sur. No. 278..... Derrick.

MIRANDO VALLEY POOL—ZAPATA COUNTY

A. R. McLennan's No. 1 Cuellar ..... T. D. 1,389 ft.; standing.
O. W. Killam's No. 3 Killam Sur. No. 182..... T. D. 1,250 ft.; drlg.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 48)

Humble and Hurlbut et al's No. 1 J. C. Wood, 150 ft. from NW line, 1,144 ft. from SW line of P. T. Irrigation Co. ..... T. D. 5,077 ft.; standing.
The Texas Company's No. 1 McCampbell, 150 ft. from N and E lines of 161-ac. tract, R. Pena Sur. ..... Location.
Simms Oil Co.'s No. 2 Holzmark, 660 ft. N and 20° E of No. 1, T. York Sur. ..... T. D. 4,458 ft.; perforating csg.
Rowan and Hope's No. 1 Gore, 600 ft. S, 300 ft. W Lot 4, T. B. Barton Sur. ..... Drlg. water well.

BEXAR COUNTY

Eckert & Son's No. 3 J. J. Brehm, 545 ft. from N line, 150 ft. from W line of lease, Sur. No. 58 ..... Location.
P. J. Connor's No. 1 Schnell, J. M. F. Perez Sur. No. 57... T. D. 788 ft.; comp. for 12 bbls.
Gatlin Oil Co.'s No. 2 I. A. Beck, 150 ft. from SE line, 2,551 ft. from SW line of lease, J. Montez Sur. ..... Location.
Kaye and Uhl's No. 1 Rhode, C. Texada Sur. No. 133 .... T. D. 665 ft.; shut down.
Long and Craig's No. 1 Sandemer ..... Location.
McElroy-Hall and Croach's No. 1 Sweeney, 450 ft. NW line, 700 ft. W line of tract, F. R. Hernandez Sur. .. Waiting on cement.
J. M. Russell's No. 1 F. L. Price, 1,500 ft. to N line, 660 ft. W of tract in Angel Navarro Sur. ..... T. D. 1,024 ft. in chalk; shut down for csg.
Snyder, Reeves et al's No. 2 Glasscock, 12 miles NE of San Antonio ..... T. D. 802 ft.; shut down.
Weibacher et al's No. 1 Ernst, 6,400 ft. S line, 900 ft. W line of J. Christopher Sur. ..... T. D. 938 ft.; preparing to test.
Somerset Syndicate's No. 1 Lagrange, 54 varas from S and W lines of Carrico tract, Sur. No. 48 ..... T. D. 375 ft.; shut down.
J. E. Weatherall and Ben C. Hillman's No. 1 Talley ....Location.
Russell & Moore's No. 3 Mills, Angel Navarro Sur. No. 5 ..... T. D. 400 ft.; drlg.
Ueckert et al's No. 1 Palfrey, 1,000 ft. S and W lines of farm ..... T. D. 1,470 ft.; shut down.

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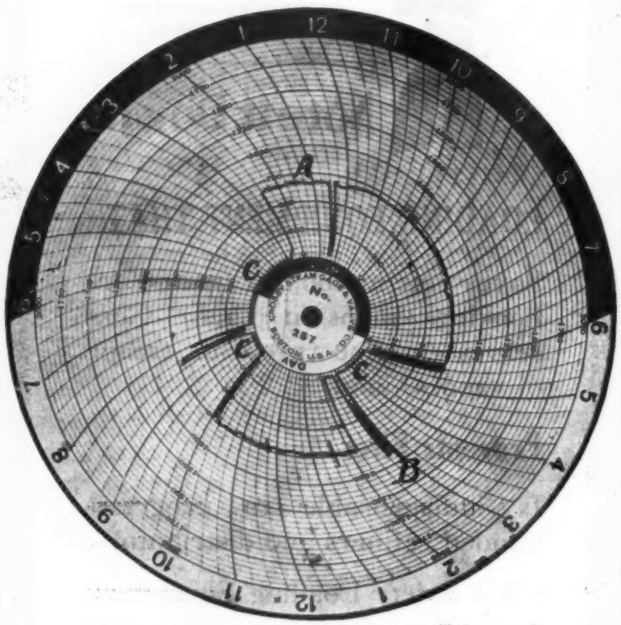
Originators of Oil-Froth Absorbers

Why a Slush Pump Gauge ?



Why Spend the Money for a Recording Gauge and Keep Charts of Pump Pressures?

Here are 3 good and valuable reasons from an actual chart taken from a well DECEMBER 9th, 1930, in the OKLAHOMA CITY FIELD.

(1) NOTE at A the fall in pressure from 6 P.M. until 12:15 A.M. This shows the gradual cutting out of two Tool Joints. (These were found on pulling out.)

SAVED BAD FISHING JOB

(2) NOTE at B—The pressure rise 750 pounds to 1000 pounds from 2:45 P.M. to 3 P.M. cuttings settling to the bottom required 1000 pounds to break circulation. This might have been a frozen string of Drill Pipe.

(3) NOTE at C—Circulating and shut down times. Here is the method of actually checking the life of the Pumps and pump parts. ACCURATELY —The length of time in operation. The Operating pressure—A REAL CHECK.

THERE ARE OTHER GOOD REASONS

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MARTIN DECKER CORP.

LONG BEACH CALIFORNIA

Mid-Continent Distributors

Reed Roller Bit Co., Houston, Texas

S. M. Terrell et al's No. 1 A. Beadom, 1,100 ft. from E line, 12,000 ft. from N line of John Barber Sur.....Location.
F. W. Tong's No. 1 Willie Sandemer, 150 ft. from NE and SE lines of the N 20 acres of Willie Sandemer 400-acre tract, Juan Montez Sur. .....T. D. 1,170 ft.; shut down.
Bowman and Waldrop's No. 1 Ridder, 1,000 ft. from S and W lines of 688-ac. tract, J. M. Sur. .....T. D. 2,000 ft.; plugged back to 600 ft.; will put on pump.
Waggoner and Stieren's No. 1 S.A.S.I.F., G. Najar Sur...T. D. 450 ft.; drlg.

CALDWELL COUNTY

Callihan et al's No. 3 W. H. Callihan, 70 ft. N, 65° E of No. 2 .....T. D. 2,525 ft.; shut down.
Jim Harper's No. 1 Tabor, Pablo Martinez Sur. .....Derrick.
Blount and Mills' No. 1 McMahan, 275 ft. from SW line, 75 ft. from SE line of 50-ac. tract, J. Pinchback Sur. .....T. D. 2,200 ft.; putting on pump.

COLORADO COUNTY

Lewis Slagel Drilling Co.'s No. 1 Henderson, 990 ft. from W line, 2,310 ft. from S line, Sec. 1, Blk. 57, T.&P. Sur. .....Location.
A. H. Eaton et al's No. 1 Sarcek, B. Schneider Sur. ....T. D. 1,220 ft.; shut down.

COMAL COUNTY

Caldwell & Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-ac. tract in the H.E.&W.T. No. 5,894 Sur. .....T. D. 600 ft.; standing.

DEWITT COUNTY

H. T. Roe's No. 1 Leinhardt .....T. D. 2,170 ft.; shut down.

DUVAL COUNTY

Gulf Prod. Co.'s No. 1 Shaeffer, J. Martinez Sur. .....T. D. 2,512 ft.; drlg.

EDWARDS COUNTY

Phillips Pet. Corp.'s No. 2 A. G. Holman, 320 ft. from N and E lines of SE of tract, C.C.S.D.&N.G.R.G. Sur. No. 25 .....T. D. 7,550 ft.; drlg.
James Dalgish's No. 2 Peterson, 850 ft. N line, 1,100 ft. W line of Sec. 82, Blk. E in the H.E.&W.T. Sur...Location.

FAYETTE COUNTY

Elam & Reynolds' No. 1 Florence, M. Muldoon Sur. No. 13 .....T. D. 771 ft.; drlg.
Kelly et al's No. 1 Burke .....T. D. 834 ft.; abnd.

FRIO COUNTY

A. H. Wray's No. 1 Burns estate, 700 ft. N, 330 ft. E of C Sec. 123, Antone Hupzor .....T. D. 3,708 ft.; bailing.

GOLIAD COUNTY

A. G. Riemenschneider's No. 1 A. T. Fromme, 275 ft. from N line, 912 ft. W line of 300-ac. tract, P. Dexeter Sur. .....T. D. 2,330 ft.; shut down.
Gibson Oil Co.'s No. 1 Cyrus Parks, 3,000 ft. S and 2,500 ft. E of NW cor. of Parks ranch, Ferguson Sur. .....T. D. 5,104 ft.; standing.
T. B. Slick's No. 1 Poetter, 1,500 ft. from SW line, 900 ft. from SE line of 591-ac. tract, Obid Marshall Sur. .....T. D. 4,213 ft.; shut in for storage.
T. B. Slick's No. 1 Allen, Obid Marshall Sur. .....T. D. 450 ft.; drlg.
Union Producing Co.'s No. 28 Ray, 150 ft. S and 800 ft. from W lines of 416-ac. tract .....T. D. 4,124 ft.; abnd.

GONZALES COUNTY

Andibus & Cummings' No. 1 R. D. and J. C. Miller, 523 ft. from S line, 1,000 ft. from E line, Ann Williams Sur. .....T. D. 2,550 ft.; shut down.
Acme Oil & Royalty Corp.'s No. 1 H. K. Weber, 2,525 ft. from NW line, 2,250 ft. from SW line, Wright Sur. .....T. D. 2,560 ft.; shut down.
Weal Oil Co.'s No. 1 Martin, 360 ft. SE line and SW line of tract, Thomas Moore Sur. .....T. D. 2,930 ft.; drlg. shale.
United North & South's No. 2 Wells, 1,250 ft. SW of No. 1 .....T. D. 4,962 ft.; abnd.

GUADALUPE COUNTY

O. K. Emerson's No. 1 C. A. Phillips, center of 80-ac. tract, Velda Sur. .....Rigging up.
Jones and Erwin's No. 1 O. Forrester, 2,700 ft. from NE cor., 450 ft. from NW line, O. Forrester tract, Pate Sur. .....T. D. 707 ft.; shut down.
Jones and Erwin's No. 1 Hoese, 150 ft. each way out of NE cor. of 200-ac. tract, J. Leal Sur. .....T. D. 691 ft.; shut down in Edwards.
Luling Oil & Gas Co.'s No. 1 Nixon, E of Darst Creek, L. W. Alexander Sur. .....Moving in rig.

HAYS COUNTY

Halley & Whittington's No. 1 Heidenrich, 4,900 ft. from NW line, 400 ft. from NE line of farm, Hemphill Sur. .....T. D. 2,427 ft.; shut down.
San Marcos Oil & Gas Co.'s No. 1 A. H. Alford .....T. D. 513 ft.; waiting on cement.

JIM HOGG COUNTY

J. D. Pulliam's No. 1 Jones, 1,020 ft. W line, 1,020 ft. S line, Share 5-A, Hinojosa Sur. .....T. D. 2,888 ft.; standing.

JIM WELLS COUNTY

Prairie Lea Prod. Co.'s No. 1 Oppenheimer .....T. D. 520 ft.; shut down.
Smith Clark Co.'s No. 1 Cuero Cattle Co. .....Location.
Stewart and Blair's (E. W. Ogden) No. 1 Farris .....T. D. 2,615 ft.; reinstated; cleaning out to deepen.

KARNES COUNTY

J. F. Morrissey et al's No. 1 Rigsdale, 660 ft. SW of C of NE line of 176-ac. farm in the McCouil Sur. .....T. D. 2,000 ft.; standing.
A. Edmiston's No. 1 Cochran, 150 ft. from S line, 500 ft. from E line of tract, D. B. McConnell Sur. .....T. D. 1,010 ft.; standing.
Huribut et al's No. 1 Newberry, 450 ft. SE and SW line of Newberry 428-ac. tract, Carlos Martinez Sur. .....T. D. 3,054 ft.; drlg.

KENDALL COUNTY

Borgett et al's No. 1 Haag, W. Avery Sur. .....T. D. 1,010 ft.; drlg.
Sitton et al's No. 1 Garvin, C of NE of D. L. Richardson Sur., in the D. L. Richardson Sur., 1 mile NE from Kendalia .....T. D. 1,165 ft.; shut down.
Dixon Oil Co.'s No. 1 Ottmer Behr, W of H.T.&B.R.R. Sur., 3½ miles SE from Sisterdale .....T. D. 2,410 ft.; shut down.
P. B. Sterling's No. 1 R. J. McCrocklin, 1,350 ft. from N line, 250 ft. from W line of the E. G. Owens Sur., 4 miles W from Kendalia .....T. D. 1,600 ft.; shut down.
R. M. Perkins' No. 1 J. Lawhorn, Sec. 10, 2,475 ft. E line, 1,488 ft. S line .....T. D. 706 ft.; standing.
Permian Oil Co.'s No. 1 Taylor, Sec. 18, G.B.&G. Sur. ....T. D. 100 ft.; shut down.

KERR COUNTY

Evans et al's No. 1 Love Ranch, 100 ft. from S line Sur. 1,597, 1,000 ft. E of W line of J. Martinez No. 1,594 Sur. .....T. D. 3,391 ft.; drlg. out bottom hole plug.
Evans and Gant's No. 1 Seiker-Mears, C.C.S.D.&R.G. N.G. Sur. No. 1,605 .....Rigging up.
Evans and Gant's No. 1 E. Young, A. E. Burge Sur. No. 28 .....Rigging up.

KINNEY COUNTY

Magnolia Pet. Co.'s No. 1 Whitehead-Wardlaw, 2,640 ft. W line and S line of Melton Valdez grant .....T. D. 5,070 ft.; drlg. lime.
Marion Oil Co.'s No. 2 Jim Clamp .....T. D. 1,389 ft.; standing.

KIMBLE COUNTY

C. L. Bryant et al's No. 1 Lambert, 7,700 ft. N and W lines of F. Lotta Sur. .....T. D. 850 ft.; standing.
Kamon et al's No. 1 Hodges .....T. D. 2,350 ft.; drlg.

LASALLE COUNTY

Fred W. Vals' No. 1 Coleman, 200 ft. from S and E lines of SW Sec. 514, B.S.&F. Sur. .....T. D. 40 ft.; standing.

LAVACA COUNTY

Cranfill & Reynolds' No. 1 Hermes, William Ryan Sur...T. D. 1,500 ft.; drlg.
Newton Oil Co.'s No. 1 Reeves, cor. of S line of Reeves tract, John Huesser Sur. .....T. D. 3,340 ft.; fishing.

LIVE OAK COUNTY

Jacob, Bussini & Pickett, Inc.'s No. 1 C. E. Kay in the Bridget Fadden Sur., 3 miles E from George West ...T. D. 3,501 ft.; shut down.
Houston Oil Co.'s No. 3 Dunning, 330 ft. from NE line and 2,300 ft. from SE line of tract, M. B. Kilvin Sur...Moving in derrick.

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SULFURIC ACID PLANT

WE are in a period of new developments characterized by the introduction of improved, modern equipment. The year 1931 offers fresh opportunities to keep in step with these latest plant facilities. Obsolete plants and equipment should be scrapped now and preparations made for increased activity.

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Houston Oil Co.'s No. 1 D. W. Snyder, 630 ft. from S line, 150 ft. from E line of Snyder tract, T. E. Garner Sur. ....T. D. 5,386 ft.; coring.
Illinois Exploration Synd.'s No. 1 Reeves-Brown, 1,300 ft. S of Sellars tract, 1,800 ft. E of Ry ....T. D. 2,145 ft.; shut down.
Sid Keoughan's No. 1 C. E. Terrell, 6,000 ft. from N line, 1,000 ft. from E line, Dan O'Boyle Sur. ....T. D. 2,840 ft.; shut down.

LEE COUNTY

Burt et al's (M. D. Rickett) No. 1 R. C. Sanders ....T. D. 3,124 ft.; shut down.
A. H. Wheeler and associates' No. 1 fee, Blk. 47, H. Donohue Sur. ....T. D. 2,209 ft.; shut down.

McLENNAN COUNTY

C. E. Groone et al's No. 1 League ....T. D. 932 ft.; shut down.
W. L. Murrel et al's No. 1 Hixon ....T. D. 775 ft.; shut down.

McMULLEN COUNTY

Mogul Pet. Co.'s No. 1 Martin, 150 ft. NW line, 150 ft. to SW line of E. Melon No. 212 Sur. ....T. D. 632 ft.; standing.
Sheree, Brodie and Emick's No. 1 Shiner, Henry Brewer Sur. ....T. D. 1,300 ft.; drlg.

MAVERICK COUNTY

Rycade Oil Corp.'s No. 6 Chittim, 1,445 ft. from S, 320 ft. from W of Sec. 7, I.&G.N. Sur. ....T. D. 3,905 ft.; drlg.
Rycade Oil Corp.'s No. 5 Sullivan, in C of Sec. 82, Blk. 7, in the I.&G.N. Sur. ....T. D. 7,449 ft.; drlg.
Texas Gas Utilities Co.'s No. 7 Chittim, 5.70° E, 1,845 ft. from No. 3, I.&G.N. Sur. ....T. D. 3,015 ft.; fishing.

MEDINA COUNTY

National Oil Co.'s No. 1 Howard, 1,750 ft. E of W line, 1,854 ft. N of S line of survey in the John George Sur. No. 9, 10 miles S of Dunlay ....T. D. 2,618 ft.; shut down.
J. H. Hickey's No. 1 Odon, H. Castro Sur. No. 176 ....Drlg. shale 613 ft.
Donaldson Oil & Gas Co.'s No. 2 Adams ....Derrick.
C. H. Florian et al's No. 1 Henry Meyer ....T. D. 200 ft.; drlg.
Caldwell et al's No. 1 L. W. Burrell ....T. D. 518 ft.; standing.
M. Eskridge et al's No. 1 Medina Valley Irrigation ....T. D. 1,278 ft.; coring.
Pat Armstrong's No. 1 Crawford, 1,389 ft. N line, 2,550 ft. E line of survey, 487.6 miles W of Devine ....T. D. 2,789 ft.; shut down.

MILAM COUNTY

Rheubotham & Tate's No. 1 Johnson, 325 ft. from N line, 250 ft. from W line of 40-ac. tract, D. Robinson Sur. ....T. D. 1,475 ft.; shut down.
Masters and Pomeroy's No. 1 Pluger, J. J. Acosta Sur. ....T. D. 40 ft.; set surface csg.
Kyser, Roberts & Dibbie's No. 2 Ward ....T. D. 2,810 ft.; drlg.
J. E. McKee et al's No. 1 Littleton, 150 ft. from N and 225 ft. from W lines of lease, C. Chevallier Sur. ....T. D. 100 ft.; shut down.
G. I. Moore's No. 1 Davis ....T. D. 2,147 ft.; abnd; hole full sulphur water.
Peggie Brothers' No. 1 M. Reed ....T. D. 650 ft.; shut down.
Service Oil & Gas Co.'s No. 1 H. G. Henslee, 500 ft. from NW line, 400 ft. from NE line of 50-ac. tract, Valdez Sur. ....T. D. 2,180 ft.; standing.

NUECES COUNTY

Grimm et al's No. 1 William Baur ....T. D. 4,280 ft.; drlg. hard rock.
H. H. Weinert's No. 1 Mohle, 450 ft. from S line, 450 ft. from W line, Sec. 94, Bishop Subd., Palo Alto lands ....T. D. 2,975 ft.; reaming.

REAL COUNTY

Evans & Sprinkle's No. 1 J. M. Auld, H.E.&W.T. Sur. No. 15 ....T. D. 876 ft.; drlg.
McGinley Corp.'s No. 1 Haby, C of SW Sec. 175 ....T. D. 925 ft.; drlg. lime.
Gant-Kilgore and Evans' No. 1 A. D. Auld, C.C.S.D.& R.G.N.G. Sur. No. 23 ....Moving in rig.

STARR COUNTY

Los Olmos Oil Co.'s No. 2 Kelsey-Bass, Blk. 6, Porcion 77 ....T. D. 269 ft.; standing.
Kush and Duerkson's No. 1 Kelsey-Bass, Blk. 9, Porcion 75, Carmargo Sur. ....Drlg. 856 ft.
Menyard et al's No. 1 Sealbury, 150 ft. from E line, 6,550 ft. from N line, Share 5, Porcion 75, Jurisdiction of Carmargo ....T. D. 349 ft.; set 8-in. csg.

SAN PATRICIO COUNTY

George B. Pickett's No. 1 Baldwin, 900 varas due E of Denton, 1,200 ft. S of the SE cor. of O'Neill Sur., Abstract 211 ....T. D. 4,020 ft.; shut down.
Saxet Oil Co.'s No. 1 Carrol, 8 miles N of Gregory ....Derrick.

TRAVIS COUNTY

Fort Bend Oil Co.'s No. 1 Engleman, 450 ft. N line, 150 ft. W line of 108-ac. tract, J. H. Denson Sur. ....T. D. 874 ft.; shut down.
Bohls and Wilson's No. 1 Norton, J. Cole Sur. ....Derrick.
E. R. Marts' No. 1 Voelker, 150 ft. N line, 150 ft. W line of tract, L. Kimbro Sur. ....T. D. 1,792 ft.; dry and abnd.

UVALDE COUNTY

Phantom Oil Co.'s No. 1 Claudt, Sec. 611 ....T. D. 2,710 ft.; shut down.
Waldrop & Welch's No. 1 E. R. Edmonds, 1,750 ft. NW, 7,200 ft. W of Sec. 71, in the A. Gomes Sur., 8 miles S of Uvalde ....T. D. 1,610 ft.; running csg.

VICTORIA COUNTY

Newton et al's No. 1 West ....T. D. 1,550 ft.; standing.
The Texas Company's No. 2 McFadden, C. M. Boyd Sur. ....Derrick.

WEBB COUNTY

Usher Carson et al's No. 3 Benavides, 150 ft. from S and W lines of Blk. 7, Sur. 1,613 ....T. D. 650 ft.; drlg.
O. W. Killam's No. 1 Bruni, 2,490 ft. from E line, 1,170 ft. from S line of Sur. No. 77 ....T. D. 3,068 ft.; drlg.

WILSON COUNTY

Stover and Wren's No. 1 John Ruess, 10,400 ft. from SW line, 2,300 ft. from NW line, O. A. Trevino Sur., No. 19 ....T. D. 1,100 ft.; shut down.

ZAPATA COUNTY

T. H. Ward's No. 1 Uribe, 150 ft. NW line, 150 ft. SW line, Blk. 8 Subd., Share 7, Partition No. 6, T. Uribe Partition of Jose V. Borrego Sur. ....Rigging up.
John Poppas Pool,Inc.'s No. 1 Flores, 2,977 ft. SE line, 6,000 ft. Rio Grande River, Porcion 35 ....Rigged up.
B. F. Nixon's No. 1 A. Guiterrez, 170 ft. S line, 332 ft. E line, Lot 5, Blk. 8, Partition 10, Borrego grant ....T. D. 50 ft.; standing.
O. W. Killam's No. 9 Slator, Borrego grant ....T. D. 2,445 ft.; drlg.
John J. O'Hern's No. 2 Benavides, Villa grant ....T. D. 1,619 ft.; testing sand.
Penny Prod. Co.'s No. 1 Juan V. Cuellar, Jr. et al, 175 ft. NE line, 175 ft. SE line Poppas Subd., Porcion 33 and 34, Blk. 1, Sur. 2 ....T. D. 1,929 ft.; standing.
William Marks' No. 1 Flores, Blk. 36, Porcion 37 ....T. D. 2,020 ft.; drlg.
National Oil Co.'s No. 1 Luther, 617 ft. NW line, 96 ft. NE line, Blk. 97, De From Subd., Porcion 6 ....T. D. 380 ft.; standing.
National Oil Co.'s No. 2 Adams, 150 ft. from NW line and SW line, Blk. 11, Borrego grant ....Location.
Mackenzie and Talmadge's No. 1 Trevino, 400 ft. SE line, 200 ft. NE line, Blk. 6, Sur. No. 4, Porcion 2 and 3 ....T. D. 570 ft.; drlg.

ZAVALA COUNTY

Carl Cromwell's No. 1 Whitecotton, C of NW Sec. 1, A.P.&M. Sur. ....Location.
F. W. Weigand's No. 1 Gates, 1,320 ft. from N line, 220 ft. from NE cor. Sur. No. 13 ....T. D. 3,215 ft.; shut down.

KANSAS FIELDS

(Continued from Page 44)

Section 12-20-2w, was rigging up. Otstot and others' No. 2 Munn, SW cor. Section 6-20-1w, was drilling 2,600 feet. Lario Oil & Gas Co. and Shell Petroleum Corp.'s No. 3 Miller, NE cor. SE SE Section 1-20-2w, was completed for 11,500,000 feet of gas a day and 522 bbls. of oil in 15 hours from the chat at 2,907-62 feet.

Harvey County

Jones & Shell Petroleum Corp. made location for No. 1 D. Lehman, C SW NE, Section 35-22-2w.

McPherson County

W. C. McBride, Inc., has the cellar dug for No. 1 Finkle, C NW NW, Section 23-19-2w. Dickey Oil Co. and Shell Petroleum Co. moved the rig in for No. 1 Williams, NE cor. NW, Section 26-19-2w. Wakefield and Shell Petroleum Corp.'s No. 1 Koehn, NE cor. NW, Section 36-19-2w, is moving in. Broswood Oil Co.'s No. 2 Giffin, C SW SW, Section 14-19-2w, has been completed for 21,000,000 feet of gas in chat 2,905-50 feet. Youker and Shell Petroleum Corp.'s No. 1 Gratton, SE cor. SW SW, Section 24-19-2w, made 9,293,000 feet of gas from chat 2,914-52 feet. Lario Oil Co. and Shell Petroleum Corp.'s No. 3 Miller, NE cor. SE SE, Section 1-20-2w, has been completed for 1,257 bbls. in chat 2,907-65 feet. United Petroleum Co. and Shell Petroleum Corp.'s No. 1 Stucky, NW cor. SW SE, Section 9-21-3w, has been completed for 250 bbls. in Wilcox sand 3,369-3,418 feet.

Rice County

McFadden and Shell Petroleum Corp.'s No. 1 Jennings, SW cor. NE NW, Section 29-18-6w, is rigging up for a shallow gas test. Muth Brothers and others made location for No. 1 Freeman, SE cor., Section 4-21-6w. Gypsy Oil Co.'s No. 1 Koenig, SW cor. NE, Section 10-20-10w, has been abandoned at 3,620 feet.

Sedgwick County

Fisher & Lauck's No. 2 Trustee, SW cor. SE, Section 19-27-2, Eastborough Pool, is drilling at 3,000 feet, being deepened from original depth of 2,973 feet. Blankenship and others' No. 1 Shaffer, NE cor. NW, Section 30-27-2, originally completed at 2,970 feet, is straightreaming 6-inch pipe to total depth 2,970 feet in order to deepen. Vickers Petroleum Co. and others' No. 2 Keys, NW cor. NE, Section 30-27-2, is an old well drilling deeper at 3,100 feet. Graham Brothers and Shell Petroleum Corp.'s No. 1 Bogue, SE cor. SW SW, Section 15-26-2, an old well deepened to 3,012 feet is a dry hole. This well will be used for salt water disposal. Blankenship, Elder and Jackson's No. 1 Schott, SE cor. SW NE, Section 24-27-1, has been completed for 50 bbls. in chat 2,979-81 feet after plugging back from 2,990 feet.

LA.-ARK. FIELDS

(Continued from Page 46)

duction, is expected to be one of the forthcoming week's highlights. With 6 feet of sand at 1,186-92 feet, it made one fourble of mud and heavy oil, more oil than mud, resembling Nevada crude, on drill stem test a week ago and set 8-inch at 1,180 feet. Greer and others abandoned No. 1 Greeson, NW NW, Section 25-12-32, Little River County, 15 miles west of Ashdown at 2,919 feet after a drill stem test from 2,860 feet resulted in salt water with a small show of gas. There was 14 feet of broken sand at the bottom, the last 2 feet in red shale.

Johnson County Gasser Completed

Arkansas-Louisiana Pipe Line Co. completed No. 1 Hudson, SE NE, Section 14-10-24, Johnson County, Clarksville district, gauging 41,300,000 feet of gas at 1,050 pounds from 3,164 feet. This is the last of three or four wells the company has been busy on in the Clarksville district during the last six months and no new locations have been reported. In the Urbana district of Union County, Marine Oil Co. finished No. 3-B Thompson, SE NE, Section 10-18-13, flowing 175 bbls. of pipe line oil through tubing from a total depth of 3,557 feet. Most Urbana wells have made larger percentages of water than they have oil.

There was not a completion in Mississippi, though several wells were not without their significance. United Production Co.'s No. 1 McIntosh, SW NE, Section 5-8-16, near Canton, ran a test from 3,270-78 feet and got 28 fourbles of salt water in 15 minutes and is shut down for orders. Mississippi-Gulf Oil & Gas Co.'s No. 1 Pope has been shut down at 3,000 feet for two weeks awaiting orders after being dry all the way down.

Gulf Test Shut Down

After a salt water test at 2,485-2,515 feet, Gulf Refining Co.'s No. 1 McLaurin, NW NE, Section 2-5-1e, Hinds County, northeast corner of the main body of proven area, is shut down in chalk at 2,632 feet. Most Jackson gas is from around 2,500 feet. Meantime the company has rig up for No. 1 School in the SW SW, Section 16-6-1e, Hinds County, a wildcat 2 miles north of nearest production in Jackson, which is in Section 28-6-1e. Love Petroleum Co. has killed No. 1 Maley, SE NW, Section 15-5-1e, which came in from 2,495 feet three or four months ago blowing gas, salt water and 13 gravity oil, and—with approximately 500 bbls. of oil in a pit is deciding what to do next. Some of the production has been used to fuel the owner's later operations. Central Oil & Gas Co.'s No. 1 Cameron, SE SE, Section 11-9-1e, is drilling ahead after a dry test at 1,533 feet. Two miles south of Jackson production, Ganzell and others' No. 1 Stallings, NE NE, Section 25-5-1e, an important test on the southern flank of the Jackson Dome was coring red beds at 3,020 feet after a salt water test at 2,675 feet. Top of the chalk was at 2,628 feet, approximately 200 feet below the average in the proven area of Jackson.

Completion of more adequate gathering lines to Loring Oil Co.'s big producer in Section 2-7-11, Zwolle, No. 15 Bowman-Hicks, completed last week with an estimated 8,500 bbls. per day, raised Zwolle's daily average runs to their highest figure to date, 10,020 bbls. The well is making around 4,500 bbls. daily into the lines through choke. Daily average runs from the division as a whole, as a consequence of this increase and smaller increases from a few of the other pools in the district, were raised 958 bbls. to a total of 93,568 bbls. and would have been more but for a 410-bbl. decline in Smackover heavy runs and 105 bbls. from Urbana and decreases in numerous other pools. Zwolle's increase of 1,300 bbls. gave North Louisiana a total run of 43,523 bbls. Arkansas runs totaled 50,045 bbls. Daily average runs from the several pools were:

NORTH LOUISIANA

Caddo, light	8,150
Caddo, heavy	2,830
Homer	3,360
Haynesville	5,585
DeSoto-Red River	2,775
Elm Grove	510
Bellevue	600
Cotton Valley	1,810
Urania	4,900
Pleasant Hill	410
Sarepta-Carterville	1,780
Zwolle	10,020
Holly	793
Total	43,523
Last week	41,890
Increase	1,633

ARKANSAS

El Dorado	3,840
Smackover, light	4,455
Smackover, heavy	33,510
Stephens	850
Nevada County	1,020
Lisbon	780
Champagnolle	4,480
Bradley	65
Mount Holly	65
Urbana	980
Total	50,045
Last week	50,525
Decrease	480
Both states	93,568
Last week	92,415
Increase	1,153

SOUTHWEST TEXAS FIELDS

(Continued from Page 48)

drilled by Southern Exploration Co. and No. 1 Thies drilled by Slick is about 3 miles southwest of No. 1 Holzmark, discovery gas well, drilled by Simms Oil Co.

Caldwell & Lanier, who have been shut down in Comal County for some time, are resuming drilling.

Elam & Reynolds figure they are getting formations high in No. 1 Florence, in southern Fayette County, a little north of Engle. Last depth reported is 1,033 feet and they have had some minor showings of gas and oil. A sand at 564 feet and another at 789 feet each carried a little gas.

In Goliad County, 5 miles east of the city of Goliad, Gibson Oil Co. completed rigging up on No. 1 Park and started to bail. The test has been standing for some time at 5,267 feet, having reached and passed contract depth but lately has been showing so much gas the company decided to test it out.

In lower Jim Wells County, a few miles west of Ben Bolt, the Prairie Lea Production Co. at around 650 feet late in the week was coring and with a showing of oil. It had taken a core at around 565 feet and had a little show there also.

EASTERN FIELDS

(Continued from Page 70)

County, the Hobbs Oil Co. completed a test on the Joseph McCoy farm in Independence Township. It was drilled in the 100-foot sand at 1,465 feet and is showing for a 1-bbl. pumper. In Washington County, H. V. Sprouls and others completed No. 3 on the J. B. Montgomery farm, Finley Township, and have a 5-bbl. producer.

In Greene County, the Manufacturers Light & Heat Co. completed a test on the Barnett Orndoff farm in the Injun sand at 3,534 feet. It is a light gas well. This well lies in Center Township. In Richhill Township, the Natural Gas Co. of West Virginia drilled a second test on the Peter Parsons farm to a depth of 2,958 feet and in the Gordon sand. It was dry in all formations. In Jackson Township, the Greene County Oil & Gas Co. completed a test on the S. B. Henderson farm at 3,374 feet in the Bayard sand. The well is showing for about 140,000 feet.

CANADIAN FIELDS

(Continued from Page 66)

crude naphtha recovery, an unusual occurrence in the Dalhousie horizon. The flow, however, fell off very rapidly and in deepening to the limestone drilling difficulties resulted.

In Section 9-19-2w5, Southern Lowery's No. 3 has rigged up and started drilling in LSD 4, the test offsetting the Mercury wells which are a little to the south. The test is reported drilling below 35 feet. Southern Lowery's No. 1, LSD 3, same section, is drilling 158 feet in the lime at 4,698 feet, and Southern Lowery's No. 2, LSD 13, is drilling at 1,292 feet.

In Section 17-19-2w5, Lowery Petroleums' No. 2 is drilling 242 feet in the lime at 5,383 feet. Mayland Oil Co.'s No. 4, same section, is at 2,290 feet and changing to rotary outfit for deeper drilling. Mayland's No. 6 is drilling at 3,401 feet.

Southwest Petroleums' No. 2, Section 8-19-2w5, is drilling at 2,915 feet.

In Central Turner Valley, Royalite Oil Co.'s No. 25, N half, Section 31-19-2w5, is drilling at 4,678 feet.

According to recent reports, Royalite Oil Co.'s No. 4, LSD 4, Section 7-20-2w5, has come back to a production of around 145 bbls. a day. No. 4 was the first deep lime producer in the field, blowing into production in October, 1924, and averaging better than 500 bbls. a day until the latter part of 1929, when it declined rapidly, and for the larger part of 1930 was practically off production. It came back in December, 1930, with around 2,000 bbls. for the month, and is reported to have done considerably better in January.

Hudson's Bay Tests

In the Castor area, Hudson's Bay Oil & Gas Co.'s No. 1 Paintearth, LSD 5, Section 27-39-15w4, showed an oil sand from 3,395-3,401 feet, but not sufficient to warrant a test. Several small gas shows have been met but there was very little gas in the oil sand. Drilling is continuing below 3,426 feet.

In the Keho Lake area, southern Alberta, Hudson's Bay's No. 1 Keho, LSD 2, Section 17-11-22w4, is drilling below 2,800 feet and carrying 13⅜-inch casing behind the tools.

Central Turner Valley

In the north end of the Central Turner Valley section, Spooner Oils' No. 4, LSD 14, Section 13-20-3w5, is unofficially reported making around 150 bbls. a day following a shot in the lime at 5,449 feet. Spooner's No. 5 will probably be started this spring. In the same section, Richfield Petroleums' No. 2, LSD 12-13, is drilling in the Kootenay horizon at 3,600 feet, approximately 150 feet from the Home sands.

In Section 12-20-3w5, New McDougall-Segur Oil Co.'s No. 3, LSD 14, is drilling 335 feet in the lime at 5,755 feet. No. 2, in same LSD, is making 25 bbls. following a shot, but may do better when cleaned out. Illinois-Alberta Oils' No. 1, same LSD, is fishing for tools after clearing the hole of lost drill rods. Widney Petroleums' No. 1, LSD 11, is drilling 355 feet in the lime at 5,370 feet. An initial wet gas flow of around 4,000,000 feet was met about 120 feet in the lime.

In Section 1-20-3w5, McLeod Oil Co.'s No. 3, LSD 16, has been given a small shot in the lime and is cleaning out.

Structure Oil & Gas Co.'s No. 1, LSD 7, Section 31-19-2w5, is below 5,200 feet and more than 475 feet in the lime with around 5,000,000 feet of wet gas. A two-weeks production test is being started to determine the possible crude naphtha recovery before drilling deeper.

South Turner Valley

A new farthest-south location has been made by Freehold Oil Corp. in LSD 9, Section 28-18-2w5, where cellar has been dug and derrick is going up for No. 4 well. The drilling contract will be handled by the Union Drilling Co. of Calgary. The company has taken over acreage recently acquired by Harold C. Ralph and allied interests. The location is one LSD south and west of Merland's No. 1. Freehold Oil Corp.'s No. 2, in Section 20-19-2w5, is a producer making around 100 bbls., and No. 3, in the same section, has been standing for some time at 90 feet. Freehold's No. 1, in the SW, Section 3-21-3w5, in the North Turner Valley was discontinued at 4,825 feet, although negotiations were under way some time ago for its completion by other interests.

In Section 16-19-2w5, East Crest Oil Co.'s No. 3, LSD 4, has resumed drilling at 1,780 feet after shutting off an unexpected gas flow which caught fire some weeks ago and delayed drilling. Boller, Sherman & Boller of Tulsa are handling the work.

Commonwealth Petroleums' No. 1 in LSD 7, Section 9-19-2w5, has resumed drilling after re-cementing casing at 4,792 feet, to overcome caving.

Mercury Operations

In the Mercury area, Mercury Oils' No. 5, Section 4-19-2w5, is drilling below 5,501 feet, and a definite marker at this depth indicates it may go to 5,650 feet before reaching the lime. Production was secured in the other Mercury wells between 5,275 and 5,432 feet. Mercury's No. 7, same section, has another fishing job at 1,905 feet. Miracle Oils' No. 3, LSD 11, same section, is reported rigged up ready to spud in. Miracle Oils' No. 2, LSD 16, Section 5-19-2w5, is drilling below 1,255 feet.

Shareholders of Mercury Oils, Ltd., held their annual meeting at Calgary recently. The officers were re-elected: President and managing director, A. H. Mayland; vice president, F. R. McDonald; secretary-treasurer, Charles Biggs; directors, Ben McMillen, Frank R. Webster.

Drilling in the Foothills

In the Pincher Creek district, southern foothills, Weymarn Petroleums' No. 2, LSD 5, Section 7-6-1w5, is at 2,476 feet and underreaming for 8¼-inch casing, preparatory to deepening. The test has been shut down since before the Christmas holidays. Rumors that Alberta Pacific Consolidated Oils, Ltd., of Calgary would complete Weymarn's No. 2 are denied by officials of both companies. In the same general area, Alberta Gas & Fuel Co.'s No. 1 Yarrow, LSD 16, Section 34-3-30w4, on Yarrow Creek, is drilling below 3,400 feet.

On the Waite Valley structure west of Turner Valley, Calgary Development & Production Co.'s No. 1, LSD 10, Section 21-19-3w5, is drilling at 3,816 feet.

On the Moose Mountain structure, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is drilling in hard formation below 3,185 feet.

Red Coulee Field

In the international Red Coulee Field, Scottish United Petroleums' No. 1, LSD 1, Section 3-1-16w4, is drilling below 1,940 feet. Farther north, Celtic Oil Co.'s No. 1, LSD 4, Section 17-1-16w4, is reported preparing to pull casing. The test, after getting a small gas show at 2,040 feet and a non-commercial oil show at 2,100 feet has been shut down at a reported depth of 2,560 feet. It is understood the derrick and equipment will be moved to a location west of Scottish United's No. 1, where Celtic's No. 2 will be drilled. Dixie Oils' No. 1, LSD 15, Section 7-1-16w4, is reported resuming at around 1,575 feet after a shutdown since last fall. C. R. Craft is the drilling contractor.

On the Montana end, Monalta Oil Co.'s No. 2 Buckley, Section 1-37-4w, has resumed work after a shutdown since last fall. The test was carried to approximately 2,530 feet and was regarded as a dry hole, but the well was left standing and shut in. On opening recently, oil was found standing 500 feet in the hole, and is reported to have later risen to 1,500 feet. There is apparently some water with the oil, but it is claimed the well is a fair commercial proposition. The well is being tubed and will be put on the pump unless the apparently increasing gas pressure proves sufficient to flow the oil. The well was originally drilled into water, but the water was shut off and the hole was plugged back to the sand.

Border Fields

In the northwestern extension of the Red Coulee Field, Dalco Oil & Gas Co.'s No. 2, LSD 7, Section 19-2-17w4, is preparing to resume drilling at 2,200 feet after a shutdown of several months. It is also reported Anglo-Western Oils' No. 1, LSD 1, Section 12-4-17w4, which was last fall carried to 187 feet, will resume work in the spring. This company is financed by British capital and was organized by J. C. Dallas of Calgary. Anglo-Western's No. 2 was located last October in LSD 16, Section 1-3-17w4, but no drilling has yet been done there.

In the Milk River district, Commonwealth Petroleums' No. 1, LSD 9, Section 9-3-15w4, is making hole slowly in the lower Devonian at 4,750 feet.

On the Spring Coulee structure, Alberta Pacific Consolidated's No. 1, Section 15-4-23w4, is at 5,268 feet and reaming. The drill is still working in the Kootenay formation, with the Sunburst sand looked for around 5,500 feet. The Sheldon-Burden Co. of Calgary have a contract to carry the test to this depth but if necessary it will likely be drilled deeper.

In the Lethbridge district, Texas-Imperial's No. 1, LSD 14, Section 22-8-22w4, is reported resuming at 1,512 feet after running 16-inch casing.

East of Coutts, material is being hauled for an important new test to be drilled on the Alberta end of the Reserve Dome by A. H. Mayland and associates of Calgary. The tentative location is approximately 13 miles east of the Rogers-Imperial gasser. Mr. Mayland has been active in the South Turner Valley development as organizer of Mayland Oil Co., now an Imperial subsidiary, and later of Mercury Oils, Ltd., and Miracle Oils, Ltd., but this is his first drilling activity in the southern Alberta border area.

Ribstone Field

In the Ribstone Field, Algonquin Petroleums' No. 1, LSD 1, Section 20-45-1w5, is drilling 8-inch hole below 1,510 feet after landing 10-inch at 1,128 feet. Rayco Oils' No. 1, LSD 3, Section 4-47-1w4, is reported rigged up ready to spud in.

The Ribstone-Blackfoot anticline, mapped by Dr. G. S. Hume of the Geological Survey of Canada some years ago, is mainly in eastern Alberta but extends across the provincial boundary line into Saskatchewan. Following an unsuccessful test by Imperial Oil, Ltd., development has been carried on by various companies associated with Ribstone Oils, Ltd. The discovery well was drilled about two years ago by Meridian Oils, Ltd., and three additional wells, Meridian's Nos. 2 and 3 and Imperial's No. 2, have since been brought in. The wells are reputed to have a potential production of 100 to 150 bbls. each, but it is possible that steady production may increase the flow. Owing to lack of refining facilities adapted to handling the asphaltic base crude, or other markets, the wells have been shut in, except for a small production taken last year to provide drilling fuel. The oil has been subjected to critical tests which proved it satisfactory for fuel and road oil purposes. It is expected that use of the crude by the Canadian Pacific Railway under a contract just concluded will pave the way for marketing elsewhere. The contract, giving an assured market for a certain amount of production, is expected to stimulate development work in the Ribstone Field, with the possibility that a lighter crude may be encountered higher on the structure, or larger wells may be brought in. It is expected that in the spring new drilling will be started on acreage of Ribstone Oils, Ltd. One test is now being drilled jointly by Algonquin Petroleums, Ltd., and Commonwealth Oils, Ltd., and a second test is being started by Rayco Oils, Ltd.

Wainwright Field

In the Wainwright Field, east central Alberta, Atkins Petroleum Syndicate, headed by Charles L. Atkins of Calgary, has located its No. 1 test in LSD 9, Section 18-45-6w4. Location is on the George Boyd farm and derrick is up. J. O. Williams, geologist, of Calgary, made the location. It is planned to run three shifts, and if satisfactory production is secured, additional tests will be drilled. Mr. Atkins, who has had experience in the Texas fields, will supervise the drilling.

Bethwain Oils' No. 2, north quarter, Section 4-45-6w4, has resumed drilling at 2,281 feet after standing for some months. The test is thought to be just above the producing sand. The company is planning to market gas from Bethwain's No. 1, LSD 13, Section 6-45-6w4, to the proposed Saskatchewan pipe line.

British Columbia Drilling

In British Columbia, Crow's Nest-Glacier Oil Co.'s No. 1 in the Sage Creek district, is drilling out a bridge formed more than a year ago after a shot. The test bottoms at 3,260 feet and before the shot had strong showings of light crude.

Saskatchewan Tests

In eastern Saskatchewan, Simpson Oil Co.'s No. 1, Section 9-29-25w2, is reported at 2,730 feet and preparing to run casing.

An important new test is being started in southern Saskatchewan near Pilot Butte, about 10 miles from Regina. The test is to be drilled by Aladdin Oil & Gas Co., of Regina, recently incorporated under Saskatchewan charter. Officers are: president, Dr. S. E. Moore; vice president, S. J. Taylor; secretary-treasurer, T. H. Williams; directors, Dr. D. C. Hart, Thomas G. McNall, Mark McPherson, Dr. Irwin Robb, J. E. McArdle, E. J. Keller. The company is installing rotary equipment previously used on the Western Alberta Oil Co.'s test on the Highwood structure, southern Alberta. The company holds 14,000 acres in the Pilot Butte area.

Dr. Fry, a United States geologist, with some associates, is reported to have leased 20,000 acres near Wilcox, Saskatchewan.

Manitoba Test

In southern Manitoba, Commonwealth Petroleum's No. 1, near Manitou, is reported at 800 feet and drilling after considerable trouble with a 30-foot quick sand between the Colorado shales and the Dakota formation. A small gas flow was met above the quick sand, and commercial gas production is thought possible in the Dakota.

Ontario Drilling

In the Dawn Field, Lambton County, Ontario, Union Natural Gas Co.'s No. 55, Stinson farm, Lot 15, Concession 3, is reported starting to drill. Union No. 56 has been located on the Christner farm, Lot 22, Concession 10.

In Middlesex County, Southern Ontario Gas Co. is moving its equipment from the abandoned Nos. 5 and 6 tests in Mosa Township to new locations.

In Kent County, American Engineering Co.'s No. 4 has been located in the D'Clute Field on the northeast corner of the south end of the Simpson farm, Lot 148, South Talbot Road, in Raleigh Township. Drilling equipment is being moved from No. 3 well in the old Fletcher oil area, to the north. Argo Oil & Gas Co., whose No. 1 test on the Mancell farm south of Fletcher, finished dry, has located No. 2 in Lot 2, Concession A, Raleigh Township. This test will be primarily drilled for oil. Frank H. Stover & Son of Chatham will handle the drilling contract.

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Most Chicago Business on Contract

Price Situation Again Reported Unsettled. Consumption Well Ahead of Last Year. Furnace Oils Unchanged

By J. B. Waldo

CHICAGO, Feb. 9.—The bulk of the business today in all petroleum products was on contract. From gasoline to heavy fuels the buying was so largely against contracts that the spot business was light by comparison. The demand for gasoline on contracts was quite large, but only an occasional seller reported any considerable spot business. The price situation in the spot market was very unsettled. All sorts of quotations were made but later in the day it was shown that the jobbers were not willing to pay more than 4⅛ cents for U. S. Motor gasoline and considerable quantities were sold at 4 cents, with a little going at less. There really seemed to be no solid foundation to the market. In case after case the refiners reduced their quoted price to secure business. There were numerous prices named for the 60 gravity with endpoints ranging from 400 to 437 degrees at prices lower than the refiners in Group 3 were asking for U. S. Motor. One rather large refiner who quoted 4¼ cents for his 400 endpoint on Saturday returned home and revised his quotation by wire to 4⅛ cents and his was only one of several such cases. The factor which seems to be most important in setting the price is the situation in the Oklahoma City Field. The trade here argued from the constant reductions in prices in gasoline which have been made during the past couple of days that the expected decision would not be favorable to maintaining prices. Consumption of gasoline is quite generally reported as well ahead of last year.

Today's weather report indicated much colder weather with snow, which would check gasoline consumption but increase that of furnace oils. The latter are moving rather steadily on contracts, with very little spot demand. Heavy industrial fuel oils were very quiet in this market today.

Prices on all furnace and fuel oils showed no change. In lubricating oils the price for 20 cold test Pennsylvania bright stocks is now quoted at 18 cents, which is an advance of 2½ cents from their low price at which sales were made recently.

From five to seven refineries which run some bright stocks in Pennsylvania are now closed down and at least two companies have bought considerable quantities.

Pennsylvania neutrals are also firmly held. Western oils are not as strong in this market.

Future Prices Uncertain

Among matters that are troubling oil men in this territory is the difficulty of arriving at some idea of what the prevailing prices for gasoline will be over the coming season. They find it difficult to arrive at any conclusion owing to the changes which have been made in the standards which formerly governed the business to a great extent. Up to, say, three years ago the price posted by the Prairie Oil & Gas Co. for Mid-Continent crude was as standard almost as if made by a decree of the Government. Today that company is no longer a purchaser of crude and does not post a price and the quotations made by other crude oil purchasers have not the same force and stability in the minds of the trade as was attached to the Prairie posted prices. One hears such varied stories regarding the prices paid for good crude by refineries that it is impossible to base a price for the finished gasoline on the posted crude prices.

Another standard which has vanished within the last few years is that of the tank wagon prices as posted by the Standard Oil and other major distributors in their respective territories. Up to a few years ago while prices might be cut occasionally, the vast bulk of the gasoline sold in each of the various territories was retailed at the price named by the major distributor in that territory. It was looked upon as dangerous to cut this price. Today even the smallest dealer feels that if he wishes he can cut any prices with the utmost freedom. This cutting of prices was not confined to the smaller class of jobbers.

Price Cuts Declared Easy to Get

Recently a jobber near this city made the statement that he could buy any brand of gasoline at 2 cents off the normal price. He said he did not mean that every station cut the prices but that within a short distance of his own station he could find one at which prices were cut to the extent mentioned or at which the agent at that station could be induced to reduce the price 2 cents a gallon. He then said that his method was simply to drive up to any station and tell the attendant that he wanted five gallons of gasoline and wanted to know what his price was. If the attendant quoted him the full price he simply remarked that the price was higher than he had to pay and he thought that as a regular customer he ought to get at least a discount of 2 cents a gallon. He said in at least 7 out of 10 cases he would be sold the gasoline at his price and asked to come back whenever he was in need of more.

Regarding the future of prices for gasoline the trade in this city and over the territory generally say that the prices will be low for the coming season. In several instances good-sized bets have been made that the price will not go above 6 cents a gallon, Group 3, for U. S. Motor gasoline during the coming season. While this month is no criterion to judge the market over the active months of the season, still the showing made has not been a good one. Gasoline is being freely offered at this time for delivery over February at 4⅛ cents for resale and this same price has been so freely quoted by certain refineries both in Texas and Oklahoma that the jobbers do not feel that they need to pay a higher price at least at the present time. They expect their prices will advance when the buying season begins early in March, but a new source of supply is being offered in East Texas which has much the same threat as did the Oklahoma City Field last year. It is even reported that some advance negotiations are under way with refineries which will begin operating shortly in East Texas regarding supplies of gasoline over a year at an attractive price.

No Stocking of Gasoline

The present conditions of the spot market, the increase in gasoline stocks and these offers from new sources of supply have so shaken the confidence of the average jobber in the gasoline market that there is almost no stocking of gasoline going on at the present time. Jobbers contend that it costs them at least 1 cent a gallon to put in and carry a quantity of gasoline for 60 days and they all seem to feel that the chances are that the market at the end of 60 days will not be more than 1 cent a gallon higher than it is at the present writing.

The demand last week in this market was fairly active for gasoline on contracts but the spot demand was rather light. One good thing noticed was that many spot orders were for immediate shipment and there was a hunt for cars in transit which could be diverted to satisfy these buyers. It is admitted that the jobbing trade is still carrying light stocks and that the annual increase to a supply adequate to a more active business has not yet begun. The demand was almost entirely for the U. S. Motor grade and for the antiknock gasoline. The sale of Ethyl Gasoline last year is reported to have shown an increase of 49 per cent compared with an increase in the sale of all gasolines amounting to only 6 per cent, so that it is evident that Ethyl Gasoline is continuing to make inroads on the sale of white gasoline. The demand for the higher gravities has been so greatly reduced since Ethyl was widely introduced that it has been quite generally assumed that the grades supplanted were of a gravity higher than the U. S. Motor gasoline, but the figures which have been given out regarding the increase of both the white and the antiknock gasolines indicate that the U. S. Motor grade has suffered to some extent.

Market Slightly Easier

The price situation in this market showed little change but toward the close of the week the market was a little easier. Natural gasoline held its own, although the buying locally was light. Grade A continued to be scarce and the few orders in this market were covered with difficulty at the former price, holders asking a little higher price. Trouble has broken out again in the Detroit area where the major distributors have reduced the price at the service stations 2 cents a gallon without disturbing the tank wagon quotations. Some action of this kind appeared inevitable to close observers as certain of the independent companies in Detroit began to cut prices shortly after the market had been re-established.

Kerosene has continued quiet and has been offered to some buyers at one-eighth to one-quarter cent reductions in price. The statements made regarding the large acreage already plowed for the spring crops in many of the states in the Standard of Indiana territory has brought the question as to why there has been no improvement in a demand for kerosene or distillate. One reason for this is that each farmer has a few horses and when there is enough time for the plowing they prefer to use them, and another reason is that with gasoline so cheap the farmer has taken the more responsive fuel.

An offer has been received from Tulsa regarding a sale of kerosene over a year at 2½ cents a gallon. While the offer is not explicit as to the origin, certain earmarks led to the belief that it will be supplied by one of the new East Texas refineries. These refineries will have the same freight rate as from Wichita Falls which would make the price 2¼ cents in some parts of the territory, the quotations being 2½ cents at the refinery instead of Group 3. It is the same plan which was tried out when some of the West Texas refineries were seeking a market for their products.

Demand for Distillate Light

The demand for distillate has been light in the way of new business. There has been the usual forwarding on contracts, although a great many distributors have been obliged to ask that all shipments be discontinued until they are able to make room. Country distributors have stated that if this consumption continues on the same scale over the remainder of the season they have enough oils in stock to carry them through and will not need to purchase any material quantity of any grade. The tendency of this lack of demand and some accumulations of stocks at the refineries has been to reduce prices, the less desirable grades suffering most.

Some fairly good 38-40 distillate was offered for resale in this city last week at 2½ cents and 2⅝ cents was a common quotation, although the makers of well-known brands of distillate are still holding for their regular price, claiming to be well sold up, but even the best distillate could be had at 2⅞ cents if the refineries had any stock to move.

Gas oils are hardly as strong as they were and the straightrun gas oils are lower in price. Purchasing agents of two of the gas companies here stated last week that they had bought U.G.I. oil at 1¾ cents, Group 3 basis, which is as low as those who buy for resale can purchase. In neither case was the name of the seller mentioned, but one of the gas company buyers stated that shipment would be made from Arkansas City. The slight demand due, in a case of zero oils, to lack of cold weather and in case of straightrun oils to lack of industrial demand for gas has permitted accumulations of stock or at least stocks on hand are not being reduced as they should be at this time of the year.

Little Change in Zero Gas Oils

In the zero gas oils there is little change. The business consists for the most part of small orders against contracts. Many of the country jobbers frankly state that unless their furnace oil business picks up during the next six or eight weeks they will be left with some oil on hand to carry over to next season. Under such conditions ordering is not free. The light fuels oils, including the 24-26 gravity, if suitable for furnace oils, are still rather firmly held although an occasional offer is made of a limited quantity at some slight concession in price or terms.

For the heavy industrial fuel oils the demand is of a regular hand-to-mouth order. There has been no inquiry for large quantity among the trade and the buying is for immediate needs only. Buyers still state that the heads of their business require them to be cautious in making purchases. Stocks of zero heavy fuel oils are still limited and this fact aids refiners in maintaining prices. The only material that is offered with freedom is made up of less desirable grades, chiefly those with a high cold test. The trade both in furnace and heavy fuel oils is still optimistic regarding the coming of bad weather with lower temperatures but it has held this attitude since the first of December and results to date have been disappointing. After the March purchases are made, the season in fuel oils is pretty well over for this year and some refiners are now carefully going about reducing their stocks.

Light Demand for Motor Oils

In lubricating oils the demand for motor oils is light as is the call for industrials. In refiner's stocks compounders bought for a portion of their needs and at the present are waiting, apparently with some success, for lower prices. Both Pennsylvania and western grades of bright stocks and of neutrals continue easy as to price with limited demand.

The major retail distributors in this territory continue to report good sales as compared with a year ago but admit that they should be as road conditions are so much better. An oil man without experience in the station business has recently been considering the purchase of a number of stations and his findings as to the actual quantity of gasoline sold at these filling stations has been a surprise to him and has deterred him from all thought of engaging in the station business. It is an undoubted fact that the number of stations has so divided the demand that only a few get anything like a fair volume of business. For some reason, and it is not that their prices are the lowest, the so-called "trackage stations" are doing a much better business than even the av-

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Eastern Market Shows Better Feeling

The Texas Company's Advance of 1 Cent in Gasoline and Indications of Revival in Export Buying Help to Dispel Gloom

By A. E. Mockler
New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, Feb. 9.—An advance of 1 cent per gallon in refinery gasoline instituted this week by The Texas Company has gone far to offset the unfavorable reactions from the Trade Commission's attitude on the industry's code of ethics, and indications of a revival in export buying of American crude oil have gone further to dispel gloom in eastern market circles.

The Texas Company has taken the leadership in marking up refinery gasoline, and it is expected that the remainder of the marekters in this area will follow in the advance, which establishes U. S. Motor gasoline at 8 cents per gallon at refineries, an advance of 1½ cents per gallon over the quotation in effect at the close of 1930.

Reports in several quarters of the market indicate that Europe, particularly France, is interested in buying crude petroleum from the United States at current levels, and it is expected that business will develop in this direction. While informal inquiries have already been made for this crude, it is not regarded as probable that the actual movement will get under way until late in the year, with the peak movement to be expected during 1932. France is building up an extensive refining industry, and while it is expected that crude oil from Iraq will ultimately supply these refineries, the United States is expected to get a large part of this business for several years, pending development of Iraquian production. Any real substantial export buying of American crude would react most favorably upon the position of the domestic market, particularly if the industry continues successful in continuing its proration and conservation program.

While the Trade Commission's attitude toward the industry's code of ethics is causing some concern among marketing interests, this subject will come in for thorough consideration at a meeting of the industry in Chicago early next month.

Refinery Gasoline

Bullish sentiment which has been prevalent in the gasoline industry for the past fortnight crystallized this week in an advance of 1 cent per gallon in refinery gasoline, putting the market up to 8 cents per gallon in tank car lots at refineries. The Texas Company initiated the advance, the increase being effective February 5.

Open weather throughout the East during the greater part of the winter thus far has made for a heavy consumption of gasoline, and sales of motor fuel in the refinery market have held up unusually well since the turn of the year. Notwithstanding this heavy consumption, however, refinery gasoline stocks have shown some increase during the past two weeks, and refiners are expected to further curtail their production to bring supply and demand into a closer relationship.

Tank Wagon Gasoline

Consumption is running into heavy totals in this area, and the unemployment situation appears to be working out to the benefit of the petroleum industry in many ways through the stimulation of week-day motoring.

Marketers in this area are exercised over the threatened overthrow of the code of ethics which has been so instrumental in bettering markets conditions in many sections of the territory, and it is expected that New York will have a large representation at the Chicago meeting next month.

The rapid expansion of Cities Service in local marketing operations, as indicated by the reported securing of substantial holdings in Richfield and Warner-Quinlan by Doherty interests is holding the interest of the trade in this territory. Control of Warner-Quinlan would put Cities Service in an important position in marketing in the metropolitan New York area, an acquisition of Richfield of New York would further diversify Cities Service distribution in important centers in the entire East Coast area.

A marked trend toward the marketing of Ethyl Gasoline is indicated by the announcement this month by Gulf of its new Ethyl motor fuel compound, leaving only two major interests in this territory which have not thus far gone in for Ethyl motor fuels.

While the so-called "low test" gasolines are still meeting with a heavy demand, tank wagon marketing operations are centering more and more on the premium fuels and the expected falling off in consumption of these higher priced gasolines, due to economic conditions, has thus far failed to materialize in any substantial form. On the contrary, the demand for premium fuels appears to be consistently widening.

Kerosene

Steady buying of kerosene was reported in the spot refinery market during the week, and the stronger tendency on gasoline brought about a better feeling on burning oils. Refiners continue to quote 41-43 water white at 6½ cents per gallon in tank car lots at refineries, with business possible at 6¼ cents, but the advance on gasoline, if made general, is expected to result in a firming up in kerosene to at least a 6½ cents minimum. Jobbing inquiry for kerosene for prompt and nearby shipment continues favorable.

Tank wagon kerosene markets appear to be fairly stable, and there is a good gallonage currently reaching marketers. There is some uncertainty among marketers regarding the outlook due to the action of the Trade Commission in withdrawing its approval of most of the provisions of the ethics code. However, kerosene marketing conditions have never been as demoralized as has been the case with gasoline.

Lubs

Pennsylvania lub prices have again yielded, and quotations this week are lower on a number of grades. Spot 600 steam refined is steady and unchanged at 16½ cents per gallon, but 635 is off a half cent at 17½ cents per gallon and 650 steam refined shows a drop of 1 cent at 21 cents per gallon. The market for 600 Pennsylvania flash is also quoted off 1 cent per gallon at 21½ cents, with 630 flash showing a corresponding drop at 28½ cents per gallon. Other grades are unchanged.

The current declines in lub oils are not expected to hold for very long, the advance in Pennsylvania crude by Crew-Levick this week, coupled with a substantial increase in demand for Pennsylvania lubs by marketers, having brought about a considerably better feeling in the market. However, it is reported, there are further weak holdings on the market, and a real recovery in the price basis must await the liquidation of these stocks.

Movement of red and pale oils is holding up well, and the market is steady, with leading sellers quoting prices unchanged from the previous week's levels. These oils have shown a greater degree of price stability during the past year than any other refined products locally.

Fuel Oil

Volume of bunker fuel oil shales has held up surprisingly well since the turn of the year, and refiners are more encouraged over the outlook for the near future. Further progress has been made in cutting down refinery holdings, stocks of fuel and gas oils held by East Coast refiners on January 31 totaling 8,219,000 bbls., as compared with 8,400,000 bbls. on January 24. Stocks of these oils held at East Coast refineries on January 3 this year amounted to 9,601,000 bbls., nearly 1,400,000 bbls. in excess of current holdings.

Refiners are quoting bunker "C" at $1.05 per barrel on both spot sales and contract deliveries, and this quotation is being generally adhered to in eastern markets. There is still some cutting on industrial sales, but this latter market appears to be firming up somewhat in sympathy with the better feeling in refined products generally.

Diesel Oil

Refiners are holding the market steady and unchanged at $1.85 per barrel in bulk, f.o.b. refinery terminals, and a fair inquiry is reported. Contract withdrawals are well maintained, and in addition refiners are getting a good spot call.

East Coast refiners are making some progress in cutting down their holdings of Diesel oil, and with the market working into firmer statistical position sellers are more optimistic regarding the price outlook for the current year.

California competition, which late last year loomed up as a menace to the stability of the East Coast price structure, is less pressing and the recent price cut in the East, coupled with a stiff charter market for intercoastal movement, is expected to definitely shut out extensive Diesel oil competition in this area from the Pacific Coast.

Gas Oil

Conditions in the gas oil market are showing a little improvement as refiners make further progress in cutting down their surplus stocks. The posted price for 28 plus recycled oil remains unchanged at 5¼ cents per gallon in tank car lots at refineries, but the market is still being freely shaded and spot oil can still be bought as low as 4¼ cents.

Gas manufacturing companies are drawing stocks of gas oil in substantial quantities. While these companies are using bunker oil in some quantities in their operations, increasing consumption of gas has offset this development to a considerable extent.

Low-grade gas oils continue to meet with a good demand for delivery against furnace oil contracts.

Furnace Oil

With stocks of fuel oils in this area getting under better control, more stability is evident in the furnace oil market and prices are firming up. Price cutting is being gradually eliminated.

Consumption of furnace oil is well maintained, and total gallonage for the year in East Coast territory is expected to establish new high records.

Paraffin Wax

A steady market prevails on spot, with prices unchanged from the previous week's levels.

Domestic inquiry has picked up a little during the week, but actual buying is not as yet running into substantial totals, and consumers are still inclined to hold off in anticipation of further price concessions. Export demand is likewise at a low ebb, although a fair movement of wax into export channels against previous sales is noted locally.

Export Market

Inactivity was again reported from the Gulf export market last week, although the market for Navy gasoline was a little firmer and sellers were quoting 5¼ cents per gallon, as compared with a previous range of 5⅛ to 5¼ cents.

Inquiries for two 10,000-bbl. cargoes of California 400 endpoint gasoline for shipment to Great Britain, which were reported during the previous week, did not result in actual business for California suppliers, the business finally going to Rumania. The same buyer was reported inquiring for three additional cargoes of 10,000 bbls. each of the same grade motor fuel, and it is expected that this business likewise will go to Rumania.

A spot cargo of Venezuelan crude was reported sold during the week. The cargo of approximately 10,000 bbls. and destined for the United States was reported closed at 78 cents per barrel.

There were two contracts reported closed for Mexican heavy crude during the week. These contracts, for approximately 250,000 bbls. each for delivery over 1931, were reported closed around 50 cents per barrel, f.o.b., plus taxes.

Interest was shown in market circles over reports that Europe might shortly be in the market for American crude in considerable quantities, and operators were awaiting further details. It is understood that the crude, if finally purchased, will be destined for France.

A quiet market for kerosene was reported in the Gulf market, with quotations unchanged. No sales in cargo lots were noted, and most of the buying interest appeared to be confined to limited quantities.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports for the week ended January 31 totaled 585,000 bbls., a daily average of 83,571 bbls., compared with 154,000 bbls., a daily average of 22,000 bbls. for the previous week and a daily average of 65,571 bbls. for the four weeks ended January 31. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	79,000
Boston	110,000
New York	172,000
Philadelphia	112,000
Others	112,000
Total	585,000
Daily average	83,571
At Gulf Coast ports—	
All ports	None
At Atlantic and Gulf Coast ports—	
Total	585,000
Daily average	83,571
Daily average four weeks	65,571

Distribution of total California receipts is as follows:

Gasoline	488,000
Fuel oil	97,000

Petroleum Exports

Quiet trading was reported in the local export market during the week, and no contracts of importance were reported closed during the period. Inquiry was fairly well maintained, but the amount of actual business reported as a result of these inquiries did not run into large figures.

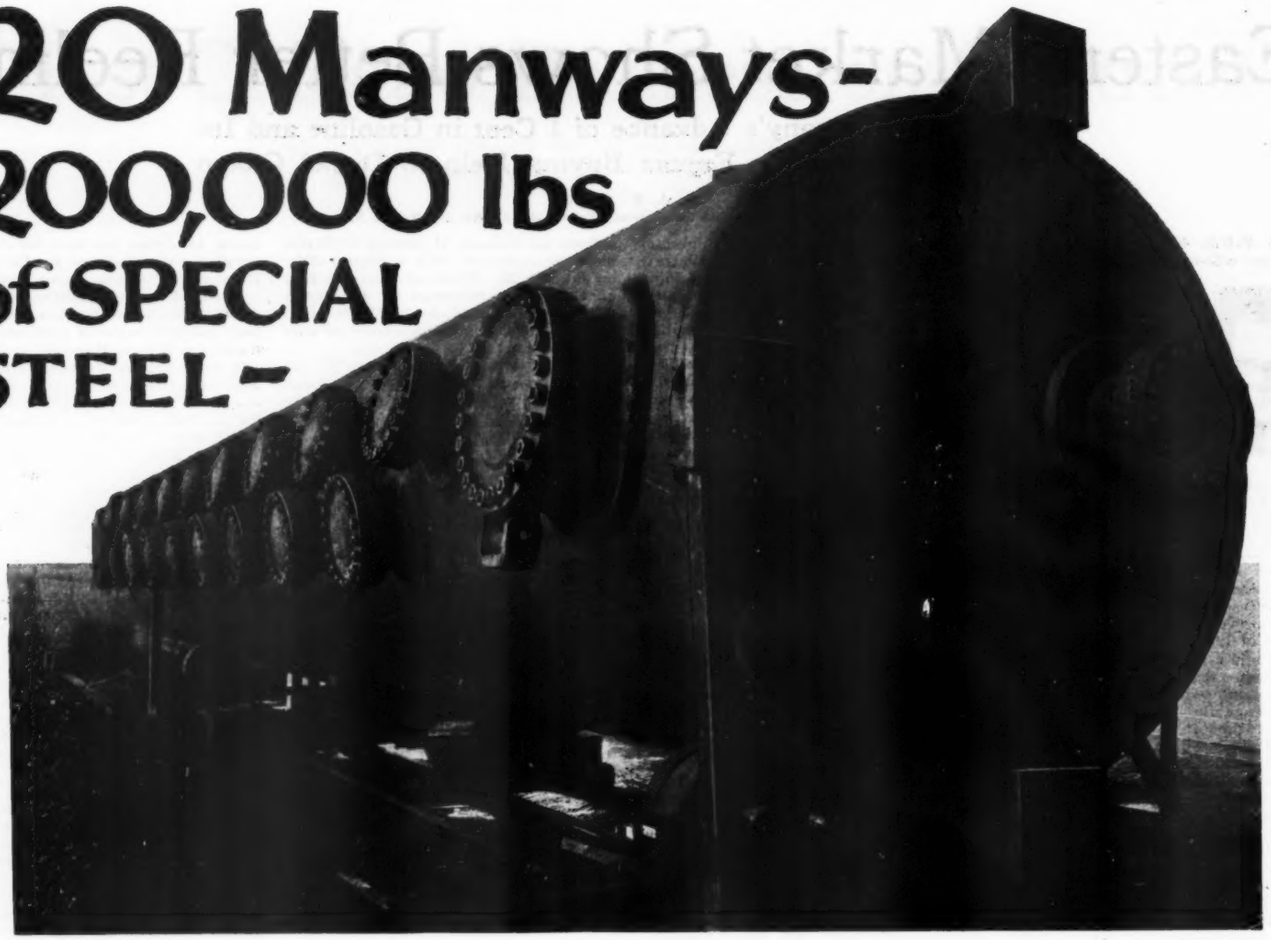
A slight falling-off in export movement of refined petroleum products from the local port was reported for the week ended January 31, declines being recorded on all of the major products. The following table shows principal exports of refined products from New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended—		
	Jan. 31	Jan. 24	Jan. 17
Gasoline	160,000	170,000	75,000
Naphtha	190,000	425,000	60,000
Kerosene	.....	325,000	40,000
Fuel oil	85,000	30,000	120,000
Lubricating oil	848,000	1,900,000	728,000
Petroleum, ref.	780,000	1,930,000	170,000
	Pounds		
Petrolatum	9,000	275,000	.....
Paraffin wax	2,140,000	2,200,000	1,400,000
Refined	540,000	990,000	50,000
Scale	965,000	270,000	685,000
Lubricating grease	1,180,000	1,565,000	1,130,000

Local export operators continue to confine their operations to routine amounts,

(Continued on Page 130)

20 Manways- 200,000 lbs of SPECIAL STEEL-



High Points of This Massive Fluid-Fusion Welded Fractionating Tower

The equipment and skill required to fabricate such a vessel as this 9′x53′ welded fractionating tower with its 20 manways and numerous nozzles is hard to appreciate.

In the first place the simple forming and handling of such enormous tonnage is beyond the equipment of the average shop. Before such fabrication ordinary welding methods are futile. The many manways and nozzles present a strain and contraction problem that would soon bring grief to the inexperienced fabricator.

But to P.I.W. with its Fluid-Fusion welding, complete equipment and wide experience such vessels are routine production requiring little more supervision than smaller and less complex equipment.

Write to the nearest sales office for particulars on Fluid-Fusion welded cracking vessels.

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Manufacture of Natural Gasoline

Only Small Volume Gas Available in East Texas Fields

Low natural gasoline prices and the small production of wet gas in the new East Texas fields of Rusk County will probably exclude natural gasoline plants from this area over the immediate future. The several companies holding large blocks of acreage in this area have each made an investigation and to date no plants have been planned.

The Arkansas Fuel Oil Co. has estimated the flow of gas from its Latham well in Gregg County to approximate 4,000,000 feet daily but a complete analysis of the gas has not been made. Wells producing gas in the Joiner Pool have shown a decided drop in their output within the past two weeks and although the gasoline content is shown as 2.72 gallons per 1,000 feet, the uncertainty of the future supply makes building a plant in this field unattractive.

The Dixie-Gulf Gas Co. is serving the field with gas for fuel purposes and there is an adequate supply. The company has not taken gas from this field to date.

Natural gasoline manufacturers, operating plants in other areas, do not view the development of the East Texas area as hazarding the future of the natural gasoline market. Instead, it may cause a slight increase in the use of natural gasoline in this area. The refineries now under construction here will have a total crude capacity of 22,000 bbls. These include a 6,000-bbl. plant at Longview and another 6,000-bbl. plant at Henderson, both being built by the East Texas Refining Co. A 2,000-bbl. refinery is under construction at Henderson, to be operated as the Beacon Oil & Refining Co. and an 8,000-bbl. plant will soon be started at Tyler by the Taylor Refining Co. None of these will be equipped with cracking units and will follow a skimming operation.

For this reason and because the gasoline from this crude must be augmented with a comparatively liberal percentage of natural gasoline, the field does not promise to be a distributing factor in the immediate future from a marketing standpoint.

CHESTNUT & SMITH LIQUIDATE

The sale of all remaining properties of the Chestnut & Smith Corp. has been approved by its stockholders and a liquidating dividend will be issued upon completion of the sales. About four months ago the Texas natural gasoline plants and producing properties were sold to the Lone Star Gas Corp. for $3,125,000 and the remaining properties include three natural gasoline plants, a small shutdown refinery and a little production, all of which is in Oklahoma. A meeting of the directors will be held within the next week, at which time the value of the remaining properties will be decided upon.

Stockholders of the company have also approved a reduction in the authorized no-par common stock by 61,519 shares to total 102,981 shares, of which 38,481 shares will be outstanding. The present outstanding preferred stock, amounting to 38,481 shares, will be retired at $119.25 a share.

CARACAS USES BOTTLED GAS

Dutch-Shell is furnishing compressed natural gas in metal drums to houses in Caracas, Venezuela. The drums weigh 100 pounds and when charged with 5,000 cubic feet of gas cost about $14. The company calls for and delivers the drums. The experiment was tried of importing similar drums from the United States but this proved too expensive.

OUTSIDE CALIFORNIA SHIPMENTS SHOW LARGE INCREASE IN 1930

Natural gasoline manufacturers in California shipped 2,498,773 bbls. of natural gasoline to foreign buyers in the Atlantic territory and 45,041 bbls. to those in Pacific territory according to information compiled by the Bureau of Foreign and Domestic Commerce. The shipments to the former territory consisting principally of European buyers, was fairly regular from month to month throughout the entire year. The peak month was August when 360,503 bbls. of natural gasoline was shipped by boat and the smallest month was in July when the shipments totaled only 67,515 bbls. The Pacific shipments were confined to one month when 45,041 bbls. were shipped.

In addition to the foreign shipments California natural gasoline was a direct factor in the Atlantic Seaboard and Gulf Coast markets. Shipments for the year in the former territory totaled 788,736 bbls. and in the latter area 924,103 bbls. Shipments to refinery buyers in that territory came in direct competition with Mid-Continent natural gasoline manufacturers who ship the bulk of their output to the Gulf Coast for distribution to domestic and foreign buyers.

As shown in the accompanying table these Atlantic Coast and Gulf Coast shipments were irregular. In October, a total of 269,316 bbls. was shipped from California through the Panama Canal to Atlantic Seaboard refiners. Five months out of the year there were no shipments.

In shipments to the Gulf Coast, the movement was greatest in June, November and December. In February, March and July no shipments were reported.

The shipments to foreign and domestic buyers outside of the Pacific Coast states totaled 4,256,653 bbls. during 1930. The total production of natural gasoline in California for the year was slightly less than 20,000,000 bbls. showing that approximately 20 per cent of the unblended natural gasoline is sold to outside buyers.

NATURAL GASOLINE SHIPMENTS FROM PACIFIC COAST, 1930
(All Shipments From Los Angeles Custom District—Bbls. of 42 Gals.)

	Atlantic intercoastal	Gulf intercoastal	Atlantic foreign	Pacific foreign	Total
January	149,178	72,035	132,963	.....	354,176
February	72,600	.....	*237,244	.....	309,844
March	129,950	.....	172,042	.....	301,992
April	.....	128,568	259,663	.....	388,231
May	16,813	72,453	175,885	.....	265,151
June	.....	144,469	272,743	.....	417,212
July	71,038	.....	67,515	.....	138,553
August	.....	72,016	360,503	.....	432,519
September	.....	71,443	130,950	.....	202,393
October	269,316	72,900	143,164	45,041	530,421
November	.....	144,297	301,450	.....	445,747
December	79,841	145,922	244,651	.....	470,414
Total	788,736	924,103	2,498,773	45,041	4,256,653

*Includes 79,396 bbls. originally reported as shipped to canal.

REFINERS AGAIN INCREASE USE OF NATURAL GASOLINE IN 1930

Refiners in the United States used more natural gasoline in 1930 than during any previous year, but the increase for the year compared to the consumption for the previous year was relatively small. In 1930 refiners used 46,670,000 bbls. at their plants while in 1929 there were 45,463,000 bbls. used, representing an increase of 1,207,000 bbls. This is substantially under the increase reported for any year since 1922, and may be contrasted with the 10,000,000-bbl. increase 1929 showed compared to 1928.

California continued to be the principal user of natural gasoline and accounted for 38 per cent of all natural gasoline blended at refineries. The group of Texas Gulf Coast refineries ranked second in importance, taking 20 per cent of the total. It is interesting to note that this group increased its use of natural gasoline by 1,700,000 bbls., while the Louisiana Gulf Coast group decreased its use by 2,400,000 bbls. This is explained by the fact that much of the natural gasoline that once moved to New Orleans to be blended for export at that point, now moves to refineries located along the Texas Gulf Coast where it is blended and moved for export.

A more exacting index of the extent to which natural gasoline is used in the refineries, according to areas, is the comparison of the volume of natural gasoline used in proportion to the total gasoline produced. The accompanying table shows this comparison and clearly indicates the wide variation existing among the different groups of refineries. California, as an example, shows an abnormally high percentage of natural gasoline used in the final blend. This may be explained by the fact that most of the natural gasoline produced in the California area is run directly to the refineries along with the crude and is not given a preliminary stabilizing.

This tends to increase the total volume by the amount of propane and butane present and this represents as much as 20 per cent of the total. Other conditions favor the use of natural gasoline in California such as the low gravity crude refined there and the absence of cracking

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NATURAL GASOLINE USED BY REFINERIES IN THE UNITED STATES ACCORDING TO AREAS

	Barrels		Per cent of total refinery gasoline	
	1929	1930	1929	1930
East Coast	2,473,000	2,223,000	4.3	4.1
Appalachian	642,000	590,000	4.0	3.6
Indiana, Illinois	2,636,000	2,925,000	4.1	5.9
Oklahoma, Kansas	4,248,000	5,077,000	6.8	8.5
Inland Texas	2,045,000	2,865,000	9.1	10.6
Inland Louisiana, Arkansas	1,535,000	1,394,000	18.5	17.8
Gulf Texas	7,704,000	9,422,000	10.9	14.5
Gulf Louisiana	5,196,000	2,795,000	22.8	10.7
Rocky Mountain	1,492,000	1,543,000	9.1	15.8
California	17,492,000	17,836,000	19.1	17.6
Total	45,463,000	46,670,000	10.5	10.6

ESSENTIALS IN SAFETY IN PLANT CONSTRUCTION

By J. P. Savell
Columbian Gasoline Corp.

The essentials of an efficient safeguard is for it to be so designed and constructed that it will prevent all accidents, both to the operator at his regular work and to others who may slip, fall or carelessly touch the machine.

Forethought in the arrangement of buildings and equipment will avoid hazards which later are difficult or impossible to remove. Accessibility (to valves, switches, oil cups, lubricators and lamps may be mentioned as common hazards) which should be obtained either by location or by providing runways and stairs or fixed ladders.

Portable ladders should be equipped with antislip bases made of material suited to the floor upon which they are being used. Where it is impossible to equip the ladder with an antislip base it is advisable to place an attendant at the foot or lash the ladder at the bottom or top or both. Stationary ladders should have plenty clearance on all sides and a back rest if of considerable height.

Floors should be so constructed that they will not become splintered, slippery, loose or uneven under the usage to which they are subjected.

Floors should be so constructed that they will not become splintered, slippery, loose or uneven under the usage to which they are subjected.

By careful planning, plant building can be so located as to eliminate railroad crossings which often result in traffic accidents. In the erection of machinery any exposed shaft end which extends more than 2 inches beyond the bearing or hub should be cut off or protected with a safety sleeve. Any projection on revolving shafts, such as keys, set screws, bolts and oil cups should be protected either by a cylindrical safety sleeve or stationary enclosures, if not within the plane of the pulley.

A safety bulletin board containing pictures and stories of accidents or near accidents which drive home what the workman can do to protect himself, is recognized as one of the most effective means of reaching the men. The secret of a live bulletin board is constant change of contents.

All clothing worn near machinery or fires should be free from loose ends, loose or ragged sleeves. Proper illumination should be considered in placing machinery. The greatest possible amount of light both natural and artificial should fall on the work and yet not shine in the eyes of the operator.

All danger points should be guarded or eliminated. Unsafe practices by workmen should be corrected. Accidents cause irregularity in production, lost time and inefficiency.

Careful attention to safety, by both mechanical and educational means, raises the morale of the working force. Foremen should see that tools and machinery are kept in proper repair and adjustment; inspect accidents and near accidents and recommend methods of prevention.

GASOLINE CONVENTION DATES

The next annual convention of the Natural Gasoline Association of America will be held in Tulsa May 19 to 21, inclusive, and a committee will have the program ready for announcement within the near future. The Natural Gasoline Supply Men's Association will again furnish the entertainment and serve dutch lunches each noon during the three days of meetings.

Brief Items for Petroleum Refiners

TAYLOR BUILDING PLANT FOR JOINER POOL CRUDE

Material for an 8,000-bbl. daily capacity skimming plant to be built at Tyler, Tex., has been ordered by the Taylor Refining Co., Tyler, Tex., and construction work is expected to start immediately. The company's plans include the laying of a 24-mile 6-inch pipe line from the Joiner Pool to the plant. The Joiner Pool is recognized as one of the most promising in the new East Texas development.

The Taylor company, of which G. L. Rowsey, developer of the cracking process of that name, is president, is operating a 7,600-bbl. daily capacity refinery at Taylor. This is a skimming plant and a recent addition to the list of Texas refineries.

FRENCH OIL COMPANIES MAY BUILD FOUR PLANTS

Four French oil companies are preparing to start construction of refineries soon, according to an unofficial announcement of the United States Department of Foreign and Domestic Commerce which is credited to a reliable source.

Compagnie Industrielle des Petroles, of Paris, has purchased a 50-acre site for a proposed refinery at Frontignan. At Bec d'ambes the Societe des Raffineries de Petrole de la Gironde, of Paris, has obtained a concession for 148 acres of land upon which to build a skimming and cracking plant capable of processing 2,100,000 bbls. annually. The company has already ordered a number of Dubbs cracking units.

At Brest the S. A. Brest Port Petrolier, of Paris, has taken a concession on 95 acres of land upon which it plans to construct skimming and cracking plants. The S. A. Unipetrole (S. A. d'Etudes pour favoriser le Developpement de l'Industrie du Raffinage en France: research organization for the advancement of the refining industry in France) has a concession for 17 acres of land at La Pallice upon which it proposes to erect skimming and cracking plants capable of processing 1,500,000 bbls. of crude oil annually.

NEW YORK STANDARD AND VACUUM HAVE 20 OPERATING REFINERIES

The merger of the Standard Oil Co. of New York and the Vacuum Oil Co., which neared realization Saturday when the Federal Circuit Court of Appeals at St. Louis held that the consolidation would not be a violation of the Sherman antitrust law, will create another organization whose refining and marketing operations are national in scope, with large manufacturing and distributing facilities in several foreign countries.

Both companies have rapidly expanded their refining and marketing facilities in recent years and the major part of the one billion dollar assets of the two companies is in these two branches of the industry, including transportation. The greater part of this expansion has been carried on through subsidiary companies, two of which are integrated concerns whose large scale operations entitle them to be classed as major units of the oil industry.

The three principal subsidiaries of the Standard Oil Co. of New York are the General Petroleum Corp., Magnolia Petroleum Co., and the White Eagle Oil Corp., The General corporation is one of the largest companies on the west coast, with three operating refineries in California and distributing facilities in all of the Pacific Coast states.

The Magnolia Petroleum Co., with six refineries in Texas having a crude oil capacity of approximately 100,000 bbls. daily, is a large distributor in that state, Oklahoma and Arkansas. Its products are also distributed in some of the adjoining states. The White Eagle Oil Corp., the last concern to be acquired, has refineries in Kansas and Wyoming, with company-owned distributing facilities in the area between Rocky Mountain states and the Mississippi River from Kansas north to the Canadian border.

The Vacuum company, until two years ago confined its activities largely to the

(Continued on Page 128)

REFINERS INVOLVED IN PROPOSED MERGER

STANDARD OIL CO. OF NEW YORK
New York City

Plant location—	Crude oil Capacity	Cracking Capacity
Brooklyn, N. Y.	19,000	8,000
Buffalo, N. Y.	5,000	2,000
Providence, R. I.	10,000	6,000
Total	34,000	16,000

WHITE EAGLE OIL CORP.
Kansas City, Mo.

Augusta, Kans.	10,000	8,000
Casper, Wyo.	4,500	4,500
Total	14,500	12,500

MAGNOLIA PETROLEUM CO.
Dallas, Tex.

Beaumont, Tex.	70,000	55,000
Magpetco, Tex.	10,000	.....
Fort Worth, Tex.	4,500	3,000
Fort Worth, Tex.	2,600	750
Corsicana, Tex.	4,000	.....
Luling, Tex.	5,000	3,750
Total	96,100	62,500

LUBRITE REFINING CORP.
St. Louis, Mo.

East St. Louis, Ill.	3,500	3,000

GENERAL PETROLEUM CORP.
Los Angeles, Calif.

Vernon, Calif.	50,000	.....
Torrance, Calif.	35,000	.....
Olinda, Calif.	2,000	.....
Lebec, Calif.	*12,000	.....
Total	99,000	.....

*Shut down.

VACUUM OIL CO.
New York, N. Y.

Paulsboro, N. J.	20,000	9,000
Olean, N. Y.	6,500	3,000
Total	26,500	12,000

WHITE STAR REFINING CO.

Wood River, Ill.	5,500	3,100
Trenton, Mich.	6,600	3,900
Total	12,100	7,000

BARTLES-MAGUIRE OIL CO.
Milwaukee, Wis.

East Chicago, Ind.	5,000	5,000
Grand total	290,700	118,000

EAST TEXAS COMPANY TO BUILD SECOND REFINERY

The East Texas Refining Co., the recently organized refining organization, will build two refineries in the East Texas area instead of one according to an announcement by Freeman W. Burford, Tulsa, president of the company.

The company is now building a refinery at Henderson, Tex., as announced last month and a second refinery is to be built at Longview, Tex. Both refineries are to be the skimming type with a rated crude oil capacity of 6,000 bbls. each. It is expected that both plants can be completed and ready to operate within 90 days.

The East Texas company has contracted with producing interests for the crude oil required for these plants. The bulk of the fuel oil output has been contracted by railroads in the East Texas area.

Mr. Burford, who is general manager of the East Texas company, is also president of the Burford Oil Co. which is operating a refinery at Pecos, Tex. J. J. Thomas, vice president of the Burford company has the same position with the East Texas company and has charge of refinery construction and operation. R. E. Bishop formerly sales manager of the Crystal Oil Refining Co., Shreveport, La., is secretary of the East Texas company and will have charge of sales. Headquarters for the East Texas company have been established at Tyler, Tex.

PHILLIPS MANUFACTURING MOVED TO BARTLESVILLE

The manufacturing department of the Phillips Petroleum Co. has been moved from Tulsa to Bartlesville, Okla., where F. E. Rice, vice president, will be in general charge. This move marks the final transfer of offices which carried on the business of the Independent Oil & Gas Co. before its merger with the Phillips company, to Bartlesville, the general headquarters of the latter company.

M. P. Youker is manager of refineries and J. M. Wadsworth is superintendent of operations. Their offices are located in Bartlesville.

NEW PLANT OF THE GULF REFINING CO. LOCATED AT PITTSBURGH, PA. (NEVILLE ISLAND)

Outstanding Design— Unequalled Results

Simplicity of operation and the recovery of products to exacting specifications characterize these Foster Wheeler distilling units. They incorporate the most advanced engineering in refinery design. The equipment is typical of Foster Wheeler distillation apparatus that is installed in refineries in all parts of the world.

The two two-stage units have the capacity to process 28,000 barrels of crude per day. Flexibility in their design permits varying the specification of side stream products to meet fluctuating market conditions.

FOSTER WHEELER CORPORATION
165 Broadway, New York, N. Y.

Branches in Principal Oil Centers

Foreign Associates: Foster Wheeler Limited, London, England.
Foster Wheeler Limited, Toronto-Montreal, Canada.
Societe Anonyme Foster Wheeler, Paris, France.

FOSTER WHEELER

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	Feb. 10		Feb. 3		Jan. 27	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.04⅛	.04¼	.04¼	.04½	.04¼	.04½
56-58 450 endpoint	.04	.04¼	.04¼	.04½	.04¼	.04½
58-60 437 endpoint (U. S. Motor)	.04⅛	.04¾	.04¼	.05	.04¼	.05
60-62 437 endpoint	.04¼	.05	.04¼	.05	.04¼	.05
60-62 400 endpoint	.04⅜	.05¼	.04⅜	.05¼	.04⅜	.05¼
64-66 375 endpoint	.04⅝	.05¼	.04¾	.05½	.04¾	.05½
68-70 360 endpoint	.05	.05½	.05	.05¼	.05¼	.05½
64-66 437 endpoint (blend)	.04	.04¼	.04	.04¼	.04	.04¼
NORTH TEXAS—						
50-52 450 endpoint	.04	.04¼	.04	.04¼	.04	.04¼
58-60 450 endpoint	.04	.04⅜	.04	.04¼	.04	.04¼
58-60 437 endpoint (U. S. Motor)	.04⅛	.04¼	.04¼	.04½	.04¼	.04¾
60-62 400 endpoint	.04¼	.04⅜	.04¾	.04½	.04⅜	.04½
64-66 390 endpoint	.04⅜	.04⅝	.04½	.04¾	.04½	.04¾
64-66 375 endpoint	.04⅝	.05	.04¾	.05	.04¾	.05
68-70 360 endpoint	.05	.05¼	.05	.05¼	.05⅛	.05¼
64-66 437 endpoint (blend)	.04	.04½	.04	.04½	.04	.04½
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.04½	.05	.04½	.05	.04¾	.05¼
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.04½	.05	.04½	.05	.04½	.05
PENNSYLVANIA—						
52-54 Naphtha	.06		.06		.06	
54-56 Naphtha	.06		.06		.06	
58-60 Gasoline	.06		.06		.06	.06¼
60 Gasoline	.06	.06¼	.06¼	.06½	.06¼	.06½
62 Gasoline	.06¼	.06½	.06½	.06¾	.06¾	.07
64 Gasoline	.06¼	.06¾	.06¾	.07	.07	
68-70 350 endpoint gasoline	.07½		.07½		.07½	
CALIFORNIA—						
†54-58 437 endpoint (U. S. Motor) domestic	.07	.08½	.07	.08½	.07	.08½
†58-62 400 endpoint domestic gasoline	.08	.09½	.08	.09½	.08	.09½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.04	.04¼	.04	.04¼	.04	
56-58 450 endpoint	.04	.04¼	.04	.04¼	.04	.04¼
58-60 437 endpoint (U. S. Motor)	.04⅛	.04½	.04¼	.04⅝	.04¼	.04¾
60-62 400 endpoint	.04¼	.04¾	.04⅜	.04⅞	.04½	.05
64-66 375 endpoint	.04¾	.05¼	.04⅞	.05⅜	.05	.05¼
64-66 437 endpoint (blend)	.04¼	.04½	.04¼	.04⅝	.04¼	.04¾
68-70 360 endpoint	.05¼	.05½	.05¼	.05½	.05¼	.05½
GULF COAST (Export)—						
58-60 U. S. Motor	.05¼		.05⅛	.05¼	.05⅛	.05¼
60-62 400 endpoint	.05½		.05½		.05½	
61-63 390 endpoint	.05⅞		.05⅞		.05⅞	
64-66 375 endpoint	.06⅛	.06¼	.06⅛	.06¼	.06⅛	.06¼

*Louisiana, Arkansas, Mississippi and East Texas delivery. †For local consumption.

NATURAL GASOLINE

	Feb. 10		Feb. 3		Jan. 27	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.03⅜		.03⅜		.03⅜	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.03½		.03½		.03½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.03¼		.03¼		.03¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.03	.03¼	.03¼		.03¼	
Grade C, 80-92, 375 e.p., rec. 78%	.03		.03¼		.03	.03¼
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.03⅜		.03⅜		.03⅜	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.03½		.03½		.03½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.03¼		.03¼		.03¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.03		.03¼		.03¼	
Grade C, 80-92, 375 e.p., rec. 78%	.03		.03¼		.03	.03¼
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.03⅜		.03⅜		.03⅜	
Grade BB, 84-92, 375 e.p., rec. 85%	.03¼		.03¼		.03¼	
Grade C, 80-92, 375 e.p., rec. 78%	.03¼		.03¼		.03¼	
CALIFORNIA—						
75-78 375-390 endpoint	.05	.06	.05	.06	.05	.06
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.03¾		.03¾		.03¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.03½		.03½		.03½	
Grade BB, 84-92, 375 e.p., rec. 85%	.03		.03¼		.03¼	

BURNING OIL

	Feb. 10		Feb. 3		Jan. 27	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.03	.03⅛	.03	.03¼	.03	.03¼
42-44 water white kerosene	.03¼	.03¾	.03¼	.03¾	.03¼	.03¾
NORTH TEXAS—						
41-43 water white kerosene	.03	.03⅛	.03	.03⅛	.03	.03⅛
40-41 water white kerosene	.02⅞	.03	.02⅞	.03	.02⅞	.03
***NORTH LOUISIANA—**						
41-43 water white kerosene	.03½	.04	.03¾	.04	.03¾	.04
***ARKANSAS—**						
41-43 water white kerosene	.03½	.04	.03½	.04	.03½	.04
PENNSYLVANIA—						
43 Kerosene prime white	.04⅞		.04⅞		.04⅞	
45 Kerosene water white	.05		.05		.05	
46 Kerosene water white	.05¼	.05½	.05¼	.05½	.05⅜	.05½
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04¾	.06	.04¾	.06	.04¾	.06
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.02⅞	.03¼	.03	.03⅛	.03	.03¼
42-44 water white kerosene	.03¼	.03½	.03¼	.03½	.03¼	.03½
GULF COAST (Export)—						
41-43 prime white	.04¼		.04¼		.04¼	
44 water white	.05¼		.05¼		.05¼	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	Feb. 10		Feb. 3		Jan. 27	
***OKLAHOMA (Group 3)—**						
Below 18 gravity Fuel Oil, per bbl.	.42½	.50	.42½	.50	.42½	.50
18-22 Fuel Oil, per bbl.	.45	.52½	.47½	.55	.47½	.55
20-22 Fuel Oil, per bbl.	.50	.57½	.50	.60	.50	.60
22-26 Fuel Oil, per bbl.	.55	.60	.55	.65	.55	.65
24-26 Fuel Oil, per bbl.	.60	.65	.65	.70	.65	.70
26-30 Fuel Oil, per bbl.	.65	.75	.70	.75	.70	.75
28-30 Fuel Oil, per bbl.	.80	.90	.85	.90	.85	.90
32-36 Gas Oil (industrial)	.02	.02⅛	.02	.02¼	.02	.02¼
32-36 Gas Oil (straw color, high cold test)	.02⅛	.02¼	.02¼	.02½	.02¼	.02½
32-36 Gas Oil (straw color, low cold test)	.02½	.02⅝	.02½	.02¾	.02⅝	.02⅞
36-38 Distillate	.02⅝	.02¾	.02⅝	.02¾	.02¾	.02⅞
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03
NORTH TEXAS—						
Below 20 gravity Fuel Oil, per bbl.	.30	.35	.30	.40	.30	.40
24-26 Fuel Oil, per bbl.	.45	.55	.50	.60	.50	.50
32-36 Gas Oil (industrial)	.01⅞	.02⅛	.02	.02¼	.02	.02¼
38-40 Straw Distillate	.02⅝	.02¾	.02¾	.03	.02¾	.03
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.70	.75	.70	.75	.70	.75
30-32 Gas Oil (low cold test)	.02⅞	.03	.02⅞	.03	.02⅞	.03
***ARKANSAS—**						
33-36 Distillate	.02¾	.03	.02¾	.03	.02¾	.03
30-32 Gas Oil	.02⅝	.02¾	.02⅝	.02¾	.02⅝	.02¾
16-22 Refinery Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
GULF COAST (South Texas)—						
Gas Oil	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
Bunker C Fuel (cargo lots), per bbl.	.65	.70	.65	.70	.65	.70
Bunker C Fuel (small lots)	.90		.90		.90	
PENNSYLVANIA—						
30-34 Fuel Oil	.03¼		.03¼		.03½	
36-40 Fuel Oil	.03½		.03½		.03½	.03¾
CALIFORNIA—						
33-36 Distillate	.02	.02½	.02	.02½	.02	.02½
26-32 Distillate	.01¾	.02	.01¾	.02	.01¾	.02
15-19 Fuel Oil, Bunker (at tidewater), bbl.	.55	.90	.55	.90	.55	.90
15-19 Fuel Oil (cargo lots, at tidewater), bbl.	.50	.80	.50	.80	.50	.80
†15-19 Fuel Oil, f.o.b. tank cars	.25	.70	.25	.70	.25	.70
27 plus Diesel, per bbl.	.80	1.05	.80	1.05	.80	1.05
30-34 Gas Oil	.85	1.05	.85	1.05	.85	1.05
CHICAGO DISTRICT (Based on Group 3)—						
18-22 Fuel Oil, per bbl.	.55	.60	.57½	.62½	.57½	.62½
22-26 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
28-30 Fuel Oil, per bbl. (zero)	.90	.95	.90	.95	.90	.95
32-36 Gas Oil (industrial)	.01⅞	.02⅛	.01⅞	.02	.02	.02¼
32-36 Gas Oil (zero)	.02½	.02⅞	.02½	.02⅞	.02½	.02⅞
38-40 Straw Distillate	.02¾	.02⅞	.02¾	.03	.02¾	.03

*Louisiana, Arkansas, Mississippi and East Texas delivery. †Lowest priced fuel oil has high sulphur content.

LUBRICATING OIL AND WAX

	Feb. 10		Feb. 3		Jan. 27	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.05	.05½	.05	.05½	.05	.05½
100 vis., 3 color, 20-25 cold test	.04¾	.05	.04¾	.05	.04¾	.05
150 vis., 3 color, 20-25 cold test	.07		.07		.07	
150 vis., 4 color, 20-25 cold test	.06½		.06½		.06½	
180 vis., 3 color, 23-28 cold test	.08½		.08½		.08½	
180 vis., 4 color, 23-28 cold test	.08		.08		.08	
180 vis., 5 color, 23-28 cold test	.07¼	.07½	.07¼	.07½	.07¼	.07½
200 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
200 vis., 4 color, 23-28 cold test	.09½		.09½		.09½	
200 vis., 5 color, 23-28 cold test	.09		.09		.09	
240 vis., 3 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 4 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
240 vis., 5 color, 25-30 cold test	.11¼	.11½	.11¼	.11½	.11¼	.11½
280 vis., 3 color, 25-30 cold test	.15½		.15½		.15½	
280 vis., 4 color, 25-30 cold test	.14½		.14½		.14½	
280 vis., 5 color, 25-30 cold test	.13½		.13½		.13½	
Cylinder Stocks:						
600, steam refined, light green	.07	.08	.07	.08	.07	.08
600, steam refined, dark green	.04½	.05½	.04½	.05½	.04½	.05½
190-200 vis., D color, Bright Stocks	.25		.25		.25	
150-160 vis., D color, Bright Stocks 0-10 c.t.	.19	.20	.19	.20	.19	.20
150-160 vis., D color, Bright Stocks 10-25 c.t.	.18	.19	.18	.19	.18	.19
150-160 vis., D color, Bright Stocks 25-40 c.t.	.17½	.18½	.17½	.18½	.17½	.18½
150 vis., E color, Bright Stocks	.17	.18	.17	.18	.17	.18
Waxes:						
124-126 White Crude Scale Wax	.02	.02⅛	.02	.02⅛	.02	.02⅛

All bright stock prices are for domestic movement.

PENNSYLVANIA—						
34 Neutral	.05½	.06	.05½	.06	.05½	.06
34 Sundebloom	.05½		.05½		.05½	.06
36 Miners' Neutral	.05	.05½	.05	.05½	.04½	.05½
150, 3 color	.11½	.12	.11½	.12	.11½	.12
180, 3 color	.16		.15	.15½	.15	.15½
200, 3 color	.17½	.18	.17¼	.18	.17¼	.18½
220, 3 color	.20		.20		.20	
600, steam refined	.08¾	.09	.08¾	.09	.08¾	.09
650, steam refined	.12½	.13½	.12½	.13½	.13	.13½
600, Pennsylvania Flash	.13	.15	.13	.15	.13	.15
630, Pennsylvania Flash	.20		.20		.20	
600, E filtered	.13		.13		.14	.15
600, D filtered, Oil City	.17	.19	.17	.19	.17	.19
Pennsylvania Bright Stocks below 35 C.T.	.18	.19	.18	.19	.18	.19
Pennsylvania Bright Stocks above 35 C.T.	.17		.17		.17	
*122-124 White Crude Scale Wax	.02⅜		.02⅜		.02⅜	
124-126 White Crude Scale Wax	.02½		.02½		.02½	

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.06	.06¼	.06	.06¼	.06	.06¼
200 vis., 3 color, pale oil	.08¼	.08½	.08¼	.08½	.08¼	.08½
300 vis., 3 color, pale oil	.09½	.09¾	.09½	.09¾	.09½	.09¾
500 vis., 3½ color, pale oil	.10¾	.11	.10¾	.11	.10¾	.11
750 vis., 3½ color, pale oil	.12¼	.12½	.12¼	.12½	.12¼	.12½
1,200 vis., 3½ color, pale oil	.14¾	.15	.14¾	.15	.14¾	.15
2,000 vis., 4 color, pale oil	.15¾	.16	.15¾	.16	.15¾	.16
200 vis., 5-6 color, red oil	.07½	.07¾	.07½	.07¾	.07½	.07¾
500 vis., 5-6 color, red oil	.08¾	.09	.08¾	.09	.08¾	.09

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

500 vis., 5-6 color, red oil	.10	.10¼	.10	.10¼	.10	.10¼
750 vis., 5-6 color, red oil	.11½	.11¾	.11½	.11¾	.11½	.11¾
1,200 vis., 5-6 color, red oil	.13¾	.14	.13¾	.14	.13¾	.14
2,000 vis., 6 plus color	.15¾	.16	.15¾	.16	.15¾	.16
CALIFORNIA—						
130 vis., 2½-3 color	.09	.09½	.09	.09½	.09	.09½
200 vis., 2½-3 color	.10	.10¾	.10	.10¾	.10	.10¾
300 vis., 3-3½ color	.10¾	.11½	.10¾	.11½	.10¾	.11½
550 vis., 3½-4 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
400 vis., 3½-4 color	.12¼	.12¾	.12¼	.12¾	.12¼	.12¾
Red Neutral:						
200 vis., 4½-5 color	.09½	.10	.09½	.10	.09½	.10
300 vis., 5-6 color	.10¼	.10¾	.10¼	.10¾	.10¼	.10¾
400 vis., 5-6 color	.11	.12	.11	.12	.11	.12
500 vis., 4½-5 color	.12¼	.13	.12¼	.13	.12¼	.13
500 vis., 5-6½ color	.12	.12¾	.12	.12¾	.12	.12¾
600 vis., 6½ plus color	.13	.14	.13	.14	.13	.14

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Feb. 10		Feb. 3		Jan. 27	
Gasoline, U. S. Motor, 58-60, 437 e.p.	.07	.08	.07		.07	
Kerosene, water white, 41-43	.06¼	.06½	.06¼	.06½	.06¼	.06½
*Fuel Oil, Bunker "C," 41-43	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	1.85		1.85		1.85	
Gas Oil, 28 gravity plus	.04¼	.05¼	.04¼	.05¼	.04¼	.05¼
25 pale Paraffin Oil, tank car	.10¼		.10¼		.10¼	
28 pale Paraffin Oil, tank car	.07¼		.07¼		.07¼	
280 red Paraffin Oil, tank car	.12½		.12½		.12½	
250 red Paraffin Oil, tank car	.11½		.11½		.11½	
225 red Paraffin Oil, tank car	.10		.10		.10	
200 red Paraffin Oil, tank car	.09¼		.09¼		.09¼	
Domestic heating oil, min. 32 grav., tank car	.04½		.04½		.04½	
Refined Wax:						
120-122 a.m.p., per lb.	.03		.03		.03	
125-127 a.m.p., per lb.	.03⅜		.03⅜		.03¼	
130-132 a.m.p., per lb.	.03¾		.03¾		.03⅝	
133-135 a.m.p., per lb.	.04⅜		.04⅜		.04⅜	
135-137 a.m.p., per lb.	.04⅝		.04⅝		.04⅝	
Petrolatum in barrels in carload lots, per pound:						
Dark Green	.01¾		.01¾		.01¾	
Amber	.03¼		.03¼		.03¼	
Extra Amber	.03⅜		.03⅜		.03⅜	
Cream	.06		.06		.06	
Lily White	.06¾		.06¾		.06¾	
Snow White	.08		.08		.08	

*Lighterage 5 cents a barrel extra. †Lighterage 6.5 cents a barrel.

NEW YORK (BAYONNE) EXPORT PRICES

	Feb. 10	Feb. 3	Jan. 27
600, steam refined cylinder stocks, in bbls.	.16½	.16½	.16½
635, steam refined	.17½	.18	.18
650, steam refined	.21	.22	.22
600, Pennsylvania Flash	.21½	.22½	.22½
630, Pennsylvania Flash	.28½	.29½	.29½
600, Warren E	.23	.23	.23
600, Oil City E	.22	.22	.22
Light 140-150 Bright Stocks	.25 .26	.25 .26	.25 .26
Dark 140-150 Bright Stocks	.23 .24	.23 .24	.23 .24

LOS ANGELES EXPORT PRICES

	Feb. 10	Feb. 3	Jan. 27
Kerosene, water white	.04¾ .06	.04¾ .06	.04¾ .06
*U. S. Motor Gasoline, 53-55, 437 e.p.	.04¾ .07	.04¾ .07	.04¾ .07
*60-62, 400 endpoint gasoline	.06 .08	.06 .08	.06 .08

*For coastwise shipments.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Rusk County, Tex.* (Feb. 10, 1931) ...$ .40
Corsicana heavy (Oct. 28) ..... .75
Other fields.....See gravity table

*Posted by Panola Pipe Line Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties.....See gravity table

WEST TEXAS

Iatan* .....Same as North Texas
Crane-Upton-Crockett, Howard and Glasscock, Mitchell and Ector .....See gravity table, Column 3
Chalk† (April 10, 1930).....$0.75

*Includes Westbrook Field. †Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover (all grades) (Oct. 30, 1930) .$0.70
Carterville, Sarepta and Cotton Valley, below 36 gravity.....See gravity table
Bellevue (Oct. 30, 1930) 1.00
Urania (Oct. 30, 1930) ..... .75
Calion, heavy (Oct. 30, 1930) ..... .70
East El Dorado (Oct. 30, 1930) ..... .70
Other fields.....See gravity table

Note—Smackover and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado posted by Gulf Refining Co. and Magnolia Petroleum Co.; Calion posted by Gulf Refining Co.

GULF COAST

Grade A (Jan. 14)*.....$0.80
Grade B, 25° and upward...See gravity table
Jennings, La. (Oct. 30, 1930)†..... .80
Refugio (light).....Same as Grade B
Refugio (heavy) (Jan. 14)* ..... .69
Markham (Jan. 15, 1931)‡..... .69
High Island (Oct. 30, 1930)† ..... .75

*Humble Oil & Refining Co. †Gulf Refining Co. of Louisiana. ‡Texas Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Iles (Feb. 15, 1930).....$0.87
33 gravity and above ..... .87
Under 33 gravity ..... .65
Dutton Creek (Oct. 28, 1930)..... 1.01
Rock Creek, Wyo. (Oct. 28, 1930)..... 1.01
Salt Creek.....See gravity table
Big Muddy (Oct. 28, 1930)..... 1.00
Grass Creek, heavy (July 27, 1928)..... .90
Grass Creek, light (Oct. 28, 1930)..... 1.25
Mule Creek (May 21, 1929)..... 1.20
Elk Basin (Oct. 28, 1930)..... 1.25
Lance Creek (Oct. 28, 1930)..... 1.33
Poison Spider (Mar. 14, 1927)..... 1.00
Notches (Mar. 14, 1927) ..... .65
Dallas-Derby (Jan. 1, 1931)..... .70
Hudson, (Jan. 1, 1931) ..... .75
Rex Lake (Feb. 22, 1930) 1.10
Osage (Nov. 1, 1930) ..... .85
Lost Soldier (Oct. 28, 1930)..... .80
Hamilton Dome (Mar. 14, 1927) ..... .85
Greybull (Oct. 28, 1930)..... 1.25
Torchlight (Oct. 28, 1930..... 1.25
Cat Creek (Oct. 28, 1930)..... 1.25
Pondera (Montana) (Oct. 28, 1930)..... 1.45
Sunburst (Montana) (Oct. 28, 1930)..... 1.55
Hogback (Feb. 15, 1930)..... 1.40
Artesia (New Mexico) (Oct. 28, 1930)..... .75
Lea County.....See gravity table
Border, Mont. 1.55
Red Coulee, Alberta 1.55

Note — Salt Creek, Osage, Cat Creek, Dallas-Derby, Hudson, Greybull and Hogback posted by Midwest Refining Co. and the remainder by the Ohio Oil Co. Both com-

(Continued on Page 126)

CRUDE OIL GRAVITY TABLE

Gravity—	Oklahoma-Kansas, Central and East Central Texas, North La.-Ark. 1	North Texas (Wichita Falls District) 2	Crane, Upton, Ector, Crockett, Howard, Glasscock, Mitchell (West Texas) Lea, N. Mex. 3	Wheeler County (Texas Panhandle) 4	Gray County (Texas Panhandle) 5	Carson and Hutchinson (Texas Panhandle) 6	Salt Creek, Wyo. 7	Stephens, Ark. 8	Winkler-Pecos (West Texas) 9	Grade B Gulf Coast and Refugio Texas 10
Below 25	....	....	.50	....	....	....	....	....	.55	.69
25 to 25.9	....	....	.52	....	....	....	....	....	.57	.71
26 to 26.9	....	....	.54	....	....	....	....	....	.59	.73
27 to 27.9	....	....	.56	....	....	....	....	....	.61	.75
28 to 28.9	....	....	.58	....	....	....	....	....	.63	.77
Below 29	.55	.55	....	....	.48	.43	....	.54	....	....
29 to 29.9	.69	.57	.60	....	.50	.45	.69	.58	.65	.79
30 to 30.9	.73	.59	.62	....	.52	.47	.73	.62	.67	.81
31 to 31.9	.77	.61	.64	....	.54	.49	.77	.66	.69	.83
32 to 32.9	.81	.63	.66	....	.56	.51	.81	.70	.71	.85
33 to 33.9	.85	.65	.68	....	.58	.53	.85	....	.73	.87
34 to 34.9	.89	.67	.70	....	.60	.55	.89	....	.75	.89
35 to 35.9	.92	.69	.72	....	.62	.57	.92	....	.77	.91
36 to 36.9	.95	.71	.74	....	.64	.59	.95	....	.79	.93
37 to 37.9	.98	.73	....	....	.66	.61	.98	....	....	.95
38 to 38.9	1.01	.75	....	....	.68	.62	....	....	....	.97
39 to 39.9	1.04	.77	....	....	.70	.65	....	....	....	.99
40 and above	1.07	.79	....	....	.72	.67	....	....	....	1.01

Column 1—Carter Oil Co. posted price schedule for Oklahoma and Kansas on October 28, 1930. Humble Oil & Refining Co. posted for North and Central Texas and East Central Texas on October 28 but made new price schedule on January 14, 1931, affecting North Texas or Wichita Falls district (see Column 2). All other companies adopted Column 1 schedule.

Column 2—Humble Oil & Refining Co. posted above prices on North Texas, Wichita, Wilbarger, Archer and North Young Counties, on January 14; The Texas Company on November 15; Stanolind Crude Oil Purchasing Co. on January 16; Gulf Refining Co. on January 14; H. F. Wilcox Oil & Gas Co. on January 14. Other companies applied the schedule to all North Texas counties in which they bought, including Clay, Montague and Foard.

Column 3—Posted by Humble Oil & Refining Co. on October 28.

Column 4—Companies quit posting April 10, but crude takes present Hutchinson-Carson prices.

Column 5—Humble Oil & Refining Co. posted above prices January 14, 1931; other purchasers adopted schedule.

Column 6—Humble Oil & Refining Co., January 14.

Column 7—Midwest Refining Co. on October 28. All crude over 37 degrees 98 cents.

Column 8—Louisiana Oil & Refining Co. and Atlantic Oil Producing Co., October 30.

Column 9—Humble Oil & Refining Co., October 28.

Column 10—Humble Oil & Refining Co. posted above prices on January 14, 1931, thus meeting the Gulf Pipe Line Co. and Gulf Refining Co. of Louisiana's price schedule posted on October 30, 1930.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co. (effective September 15, 1930), Union Oil Co. (effective September 15, 1930)

Gravity—	Long Beach, Seal Beach, Alamitos Hts., Huntington Beach, Inglewood, Torrance, Richfield, Olinda, Brea Canyon 1	Whittier, La Habra, Coyote Hills 2	Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills 3	Montebello 4	Santa Fe Springs 5	Santa Maria, Coalinga 6	Wheeler Ridge 7	Orcutt, Ventura, Rincon 8	Ventura Avenue 9	Elwood Terrace 10	Athens, Rosecrans, Domingues 11
14 to 14.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
15 to 15.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
16 to 16.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
17 to 17.9	.70	.70	.55	.70	....	.55	.55	.55	.70	....	....
18 to 18.9	.76	.76	.62	.71	....	.62	.62	.65	.76	....	....
19 to 19.9	.82	.82	.70	.77	....	.70	.70	.70	.82	....	....
20 to 20.9	.88	.87	.78	.83	....	.78	.78	.78	.88	....	....
21 to 21.9	.94	.93	.86	.90	.92	.86	.86	.90	.91	....	....
22 to 22.9	1.00	.98	.94	.97	.95	.94	.94	.95	.94	....	....
23 to 23.9	1.07	1.04	1.02	1.05	1.01	1.02	1.02	1.02	1.00	....	....
24 to 24.9	1.12	1.08	1.06	1.08	1.05	1.04	1.04	1.08	1.05	....	1.12
25 to 25.9	1.17	1.12	1.10	1.11	1.09	1.06	1.06	1.11	1.10	....	1.17
26 to 26.9	1.22	1.16	1.14	1.15	1.13	1.08	1.08	1.15	1.15	....	1.22
27 to 27.9	1.26	1.21	1.18	1.19	1.18	1.11	1.10	....	1.19	....	1.27
28 to 28.9	1.30	1.25	1.22	1.23	1.23	1.15	....	....	1.23	....	1.32
29 to 29.9	1.34	1.29	1.29	1.26	1.28	1.19	....	....	1.27	....	1.37
30 to 30.9	1.38	1.33	1.35	1.29	1.33	1.23	....	....	1.31	....	1.42
31 to 31.9	1.43	....	1.40	....	1.38	1.27	....	....	1.35	....	1.47
32 to 32.9	1.48	....	1.47	....	1.43	1.31	....	....	1.41	....	1.52
33 to 33.9	....	....	1.53	....	1.48	1.35	....	....	1.47	....	1.57
34 to 34.9	....	....	1.59	....	1.53	1.39	....	....	1.53	1.32	1.62
35 to 35.9	....	....	1.65	....	1.58	1.43	....	....	1.59	1.39	1.66
36 to 36.9	....	....	....	....	1.63	....	....	....	....	1.46	1.72
37 to 37.9	....	....	....	....	1.68	....	....	....	....	1.53	1.78
38 to 38.9	....	....	....	....	1.73	....	....	....	....	1.60	1.84
39 to 39.9	....	....	....	....	1.78	....	....	....	....	1.66	1.90
40 to 40.9	....	....	....	....	....	....	....	....	....	1.72	1.96
41 to 41.9	....	....	....	....	....	....	....	....	....	1.78	2.02
42 to 42.9	....	....	....	....	....	....	....	....	....	1.84	2.08

Note—Standard Oil Co. of California, effective December 18, 1930, established the following posted prices for oil purchased in the Playa Del Rey Field: 20-20.9 degrees 74 cents; 21-21.9 degrees, 77 cents; 22-22.9 degrees, 81 cents; 23-23.9 degrees, 84 cents; 24-24.9 degrees, 87 cents; 25 degrees and above, 90 cents. Union Oil Co. adopted same price schedule on December 18. On January 20 the Union Oil Co. announced a gathering charge of 5 cents per barrel for receiving and delivering the oil into its pipe line.

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain, 11 to 13.9 gravity, 50 cents; 14 gravity and above 55 cents, effective March 11. On March 11 the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 50 cents. Fruitvale, posted by General Petroleum Co., 11-13.9, 50 cents; 14 gravity and above, 55 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity.

Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 50 cents.

Column 5—Price change posted by Standard of California September 16.

Column 6—Oil below 14 gravity posted at 45 cents.

Column 8—Posted by General Petroleum Co.

Kettleman Hills—Union Oil Co., September 22, 35 to 39 gravity, $1.10; 40 to 44 gravity, $1.20; 45 to 49 gravity, $1.35; 50 to 54 gravity, $1.50; 55 gravity and above, $1.65. Standard Oil Co. of California, 55 gravity and above, $1.65.

TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Feb. 10

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago*	16.0	17.0	3.0	11.0
Decatur, Ill.	16.4	17.4	3.0	11.0
E. St. Louis	15.7	16.7	3.0	10.2
Joliet	16.4	17.4	3.0	11.0
Peoria	16.4	17.4	3.0	11.0
Quincy	16.2	17.2	3.0	10.8
Davenport, Ia.	16.5	17.5	3.0	11.3
Des Moines	16.5	17.5	3.0	11.3
Keokuk	16.5	17.5	3.0	11.3
Sioux City	16.1	17.1	3.0	10.9
Duluth, Minn.	17.5	18.5	3.0	11.9
Mankato	17.1	18.1	3.0	11.7
Minneapolis	17.2	18.2	3.0	11.9
La Crosse, Wis.	16.2	17.2	3.0	12.0
Milwaukee	15.1	16.1	3.0	10.9
Madison	16.3	16.2	3.0	11.1
Detroit, Mich.	16.8	16.8	3.0	12.7
Grand Rapids	16.7	17.7	3.0	12.6
Saginaw	16.9	17.9	3.0	12.8
Evansville, Ind.	17.1	18.1	4.0	11.9
Indianapolis	17.3	18.3	4.0	12.1
South Bend	17.4	18.4	4.0	12.2
Fargo, N. D.	18.9	17.0	3.0	13.9
Huron, S. D.	18.3	17.5	4.0	12.7
Sioux Falls	17.8	17.0	4.0	12.4
K. C., Mo.	15.9	16.9	3.0	9.6
Springfield†	15.9	16.9	3.0	10.5
St. Louis†	14.9	15.9	2.5	10.3
St. Joseph	15.5	16.5	3.0	10.1
Wichita, Kans.	14.8	13.8	3.0	9.8
Bartlesville, Okla.	15.5	18.5	4.0	9.5

*Effective June 3, discounts on Q.D.A. in Chicago district 4 cents off service station price on purchases of 500 gallons or more per month and 5 cents on purchases of 1,000 gallons or more per month.

†State tax 3 cents; remainder city tax.

Effective August 5, the following quantity discounts from the service station prices are allowed on monthly sales of gasoline: 500 gallons or more, 3 cents; 75,000 gallons or more, 4½ cents. Discounts are allowed each month and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discounts on the previous month's purchases.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Wh'ls'e price	Retail price	Incl'ds tax of	tank wagon
Fresno	21.0	21.0	3.0	17.0
San Francisco	21.0	21.0	3.0	15.5
Los Angeles	20.5	20.5	3.0	15.5
Reno, Nev.	26.0	20.0	4.0	19.0
Portland, Ore.	22.5	22.5	4.0	16.5
Seattle, Wash.	21.5	21.5	3.0	16.5
Tacoma	21.5	21.5	3.0	16.5
Spokane	22.0	22.0	3.0	20.5
Phoenix, Ariz.	20.5	22.5	5.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 3 cents plus a 2-cent special temporary discount subject to withdrawal at any time.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	14.5	15.5	3.0	11.5
Newark	13.5	15.5	3.0	10.5
Annapolis, Md.	16.0	17.0	4.0	11.0
Baltimore	15.2	16.2	4.0	9.5
Cumberland	17.0	18.0	4.0	12.0
Wash'gton, D.C.	13.7	14.7	2.0	10.7
Danville, Pa.	17.8	18.8	5.0	11.8
Norfolk, Va.	16.3	17.3	5.0	10.6
Petersburg	17.3	18.3	5.0	11.3
Roanoke	18.0	18.0	5.0	12.0
Richmond	16.7	17.7	5.0	10.7
Charles'n, W.Va.	16.5	17.5	4.0	11.5
Keyser	17.1	18.1	4.0	12.0
Parkersburg	15.2	16.2	4.0	10.2
Wheeling	16.4	17.4	4.0	11.4
Charlotte, N. C.	18.3	19.3	5.0	12.3
Hickory	18.6	19.6	5.0	12.6
Mt. Airy	18.5	19.5	5.0	12.5
Salisbury	18.5	19.5	5.0	12.5
Charleston, S. C.	17.3	18.3	6.0	10.3
Columbia	19.3	20.3	6.0	12.3

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	17.25	18.25	4.0	11.25
McCook	18.75	20.75	4.0	12.75
Norfolk	17.25	17.25	4.0	11.75
N. Platte	18.75	20.75	4.0	12.50
Scottsbluff	18.75	20.75	4.0	12.25

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.*	16.5	17.5	6.0	12.0
Baton Rouge	17.5	18.5	5.0	13.0
Alexandria†	18.5	19.5	6.0	13.0
Lafayette*	18.5	19.5	6.0	13.0
Lake Charles*	18.5	19.5	6.0	13.0
Shreveport	17.5	18.5	5.0	13.0
Knoxville, Tenn.	19.0	20.0	5.0	15.0
Memphis	17.0	18.0	5.0	12.5
Chattanooga	18.5	19.5	5.0	13.0
Nashville	18.0	19.0	5.0	15.0
Bristol	20.0	21.0	5.0	14.0
Lt. Rock, Ark.	16.0	17.0	5.0	12.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Gasoline price at Alexandria includes 1-cent tax in Parish of Rapides.

Two-cent discount off gasoline tank wagon price to dealers and commercial accounts.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points*	16.0	17.0	4.0	†13.0

*Dealers and commercial accounts 2 cents under tank wagon.

†Service station price 14 cents.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	14.0	19.0	...	12.0
Philadelphia	14.0	19.0	...	12.0
Scranton	14.0	19.0	...	12.0
Allentown	14.0	19.0	...	12.0
Altoona	14.0	19.0	...	12.0
Erie	14.0	18.0	...	11.0
Dover, Del.	17.0	19.0	3.0	12.0
Wilmington	17.0	19.0	3.0	12.0
Springf'd, Mass.	17.5	19.5	2.0	10.0
Worcester	17.3	19.3	2.0	10.0
Boston	14.5	16.5	2.0	10.0
Providence, R.I.	12.7	14.7	2.0	10.0
Hartford, Conn.	17.5	19.5	2.0	10.0
New Haven	17.6	19.6	2.0	10.0

*Includes tax of 3 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	14.0	17.0	4.0	13.5
Pueblo	14.0	17.0	4.0	13.5
Grand Junction	15.0	19.0	4.0	17.0
Casper, Wyo.	17.0	20.0	4.0	12.0
Cheyenne	18.0	19.0	4.0	13.5
Butte, Mont.	19.0	20.0	5.0	18.0
Billings	20.0	23.0	5.0	16.5
Great Falls	20.0	23.0	5.0	18.0
Helena	20.0	23.0	5.0	18.0
Salt Lake, Utah	19.0	22.0	3.5	17.0
Albu'que, N. M.	16.0	20.0	5.0	14.0
Boise, Idaho	22.5	...	5.0	19.0
Twin Falls*	22.5	....	5.0	19.0

*Two and one-half cents off tank wagon to dealers at time of delivery.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 349 gallons	8.0
350 gallons or more	7.5

Note—Outside Chicago furnace oils discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	12.0	8.0
V.M.&P. naphtha	14.0	9.5
Cleaners' naphtha	16.2	11.0
Stanisol	16.2	11.0

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	20.0	22.0	6.0	12.5
Augusta	20.0	22.0	6.0	15.5
Macon	20.0	22.0	6.0	13.0
Savannah	19.0	19.0	6.0	13.0
Birm'ham, Ala.	19.0	21.0	5.0	15.0
Mobile	19.0	21.0	4.0	15.0
Montgomery	19.0	21.0	4.0	15.5
Clarks'le, Miss.	18.0	20.0	5.0	13.5
Jackson	18.0	20.0	5.0	13.5
Natchez	18.0	20.0	5.0	13.5
Gulfport	18.0	18.0	5.0	13.5
Vicksburg	18.0	20.0	5.0	13.0
Jack'ville, Fla.	19.0	21.0	6.0	14.0
Miami	20.0	22.0	6.0	14.0
Pensacola	20.0	22.0	6.0	13.5
Tampa	19.0	21.0	5.0	13.0
Lexington, Ky.	17.0	18.0	5.0	14.5
Covington	17.0	18.0	5.0	13.5
Louisville	16.0	18.0	5.0	11.0
Ashland	17.0	19.0	5.0	13.0
Paducah	17.0	19.0	5.0	12.0
Bowling Green	19.0	21.0	5.0	14.5
Corbin	19.0	21.0	5.0	15.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery, Birmingham and Mobile state taxes add 1-cent levy tax. To Gulfport state tax add privilege tax of 2 cents.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	14.0	17.0	4.0	11.0
Fort Worth	14.0	17.0	4.0	10.0
Houston	15.0	19.0	4.0	11.0
San Antonio	13.0	17.0	4.0	10.0
El Paso	16.0	20.0	4.0	12.0
Texarkana	17.0	17.0	4.0	11.0
Muskogee, Okla.	15.0	18.0	4.0	9.0
Okla. City	13.0	16.0	4.0	10.0
Tulsa	13.0	17.0	4.0	10.0
Ft. Smith, Ark.	17.5	18.5	5.0	12.0
Little Rock	16.0	17.0	5.0	12.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	16.6	17.6	2.0	15.6
New York*	15.3	15.3	2.0	14.3
Buffalo	15.8	15.8	2.0	14.8
Rochester	16.0	16.0	2.0	14.0
Syracuse	16.8	16.8	2.0	14.8
Boston, Mass.	15.5	15.5	2.0	13.5
Augusta, Me.	18.8	18.8	4.0	14.8
Manch'tr, N. H.	18.4	18.4	4.0	14.0
Burlington, Vt.	19.3	19.3	4.0	15.3

*Prices in steel barrels.

TANK WAGON CHANGES

The Continental Oil Co. reduced the gasoline station price in Denver, Colo., to 14 cents on February 3. On January 31 the dealer discount off the tank wagon price was eliminated at Boise, Idaho, making the net tank wagon price 22½ cents.

Standard Oil Co. of California reduced the regular dealer discount to 3 cents in Phoenix, Ariz., January 30, but also established a 2-cent special temporary discount there to be withdrawn without notice.

Standard Oil Co. (Kentucky) reduced the gasoline tank wagon and station prices to 19 cents and 21 cents in Jackson, Fla., January 14. On January 28 the gasoline tank wagon and station prices were posted at 20 and 22 cents in Miami, Fla., and the kerosene price at 15 cents. On the same date the gasoline tank wagon and station prices were posted at 21 and 23 cents and the kerosene price at 15 cents in Pensacola, Fla. On the same date the gasoline tank wagon and station prices were posted at 19 and 21 cents in Tampa, Fla., and the kerosene price at 14 cents there. On January 30 the gasoline station price was posted at 19 cents in Savannah, Ga. On January 21 the kerosene price was posted at 13.5 cents in Vicksburg, Miss. On February 1, the gasoline tank wagon and the station prices were posted at 18 cents each in Gulfport, Miss. On January 30 the gasoline tank wagon and station prices were reduced 1 cent in Pensacola, Fla., to 20 cents and 22 cents.

Standard Oil Co. of Louisiana reduced the gasoline station price 1 cent at all points in Louisiana, Tennessee and Arkansas and eliminated the 1-cent cash discount February 7.

Standard Oil Co. of Indiana reduced the gasoline station price to 16.8 cents in Detroit February 4. On the same date the gasoline station price was reduced to 17 cents in Fargo, N. D.

OIL CREEK CRUDE ADVANCED

TITUSVILLE, Pa., Feb. 7.—The Oil Creek Refining Co. with a plant in East Titusville, has posted a price of $2 per barrel for crude oil. The company buys its crude supply from local fields where the Seep Purchasing Agency price is $1.85 per barrel.

CRUDE OIL PRICES

(Continued from Page 125)

panies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia posted by Ohio Oil Co. and Continental Oil Co. Latter company posted 50 cents per barrel January 1, 1931. Border and Red Coulee posted by Imperial Refining Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Oct. 28, 1930)*	$0.90
Luling (Oct. 28, 1930)†	.75
Mirando (Jan. 14)*	.69
Pettus (Oct. 28, 1930)*	1.10
Salt Flat (Oct. 28, 1930)*	.90
Thrall‡	....
Lytton Springs (Lockhart) See gravity table	
Dobrowolski (Oct. 25, 1930)‡	....
Same as Mid-Continent gravity scale up to and including 38-38.9° at	1.01
Somerset (Oct. 25, 1929)¶	....
Same as Mid-Continent gravity scale up to and including 38-38.9° at	1.01

*Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co. †Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ¶Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products Co. ‖Pioneer Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective Nov. 12, 1930)

Penna Grade Oil in National Transit Lines (Pennsylvania)	$1.85
Penna Grade Oil in Southwest Pennsylvania Lines (Pennsylvania)	1.80
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio) (Sept. 14, 1930)	1.45
Corning Grade Oil in Buckeye Pipe Line Co.'s Lines (Dec. 31, 1930)	1.15
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky)	1.10
Wayne District Oil in Cumberland Pipe Lines	1.17

Tide Water Pipe Co.

Bradford district (Nov. 12, 1930)	$2.15
Allegany district (Nov. 12, 1930)	2.15

Pure Oil Co.

Cabin Creek, W. Va. (Nov. 12, 1930)	$1.70
Kelly Creek, W. Va. (Nov. 12, 1930)	1.70
Bradford Hollow, W. Va. (Nov. 12, 1930)	1.70

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective Oct. 28, 1930)

Lima	$1.10
Wooster	1.40
Illinois	1.30
Indiana	.87
Princeton	1.20
Plymouth	.89
Western Kentucky	1.15
Midland, Mich.*	1.10
Dundee, Mich. (Oct. 24)†	....
Same as Mid-Continent gravity scale	
Upper and Lower Traverse Sands, Mich. (Oct. 28, 1930)†	....
Same as Mid-Continent gravity scale	
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (Oct. 28)‡	.85
Oil City, Ky.§ (Jan. 14)	.80
Oil Springs (Canada) (Oct. 28)¶	1.57
Petrolia (Canada (Oct. 28)¶	1.50

*Posted by Pure Oil Co. †Posted by Standard of Indiana for boat shipment. ‡Posted by Paragon Development Co. §Posted by Stoll Refining Co. ¶Posted by Imperial Oil, Ltd.

MEXICAN CRUDE

Panuco*	$0.66

*F.o.b. ship, based on December transactions and exclusive of taxes and bar dues.

CRACKING PARAFFIN BASE CRUDE OILS

(Continued from Page 38)

ily cracked to give a high yield of antiknock gasoline.

Results from some of the work carried out in cracking Pennsylvania kerosene follows:

Gasoline From Kerosene

A Pennsylvania kerosene distillate subjected to cracking conditions, to produce a high yield of antiknock motor fuel, analyzed as shown in the table:

Analysis of the Kerosene Cracking Stock

The Pennsylvania kerosene distillate of 45 A.P.I. gravity analyzed as follows:

DISTILLATION ANALYSIS
(A.S.T.M. 100 cc. distillation)

Initial boiling point	322° F.
Per cent distilled over—	Temp. ° F.
10	384
20	398
30	413
40	429
50	447
60	464
70	484
80	507
90	552
95	607
Endpoint	649
Per cent distilled over at 410° F.	28.5
Per cent distilled over at 437° F.	43.0
Per cent distilled over at 572° F.	92.0

The kerosene was subjected to cracking conditions by means of the "flash" method of operation.

Method of Operation

The apparatus used during the cracking experiments consisted of a heating coil, reaction chamber, dephlegmator, flash chamber, charging and hot oil pumps, receiver, and instruments for the control of temperatures and pressures.

The kerosene was charged to the heating coil under pressure, mixed with reflux condensate from the fractionating tower. The oil, during its forward movement in the continuous pipe coil in a furnace, was progressively heated so as to attain the temperature desired. The heated hydrocarbons passed to a reaction chamber at temperatures from 935° F. and 980° F. and under a pressure of 350 pounds, during the test under consideration.

The hydrocarbon mixture leaving the reaction chamber flowed into a "flashing vessel" where segregation of the vapors and residue resulted, the cracked vapors passing to a dephlegmator where fractionation into light and heavy hydrocarbons took place. The endpoint gasoline vapors leaving the top of the dephlegmator flowed through a water-cooled condenser and were collected in a receiver and passed to storage. The reflux condensate was returned to the heating coil for further treatment. The residue from the flash chamber was drawn off in a continuous manner to a cooling still and thence to storage.

Operating Conditions

The operating conditions for the different cracking tests on kerosene are tabulated as follows:

Test No.:	1	2	3	4	5	6	7	8	9
Pressure (pounds)	350	350	350	350	350	350	350	350	350
Temp., ° F., average	949	950	980	935	940	945	960	938	935

Summary of Yields
(Based upon the kerosene charged)

The yield of gasoline, including that derived from the gas, flashed residue and incondensable gas derived from cracking kerosene distillate are reported in the following table:

Gasoline, per cent	73.0	78.5	73.1	78.3	74.3	74.5	75.1	74.5	75.7
Flashed residue, per cent	9.3	7.5	11.3	7.0	6.4	5.1	7.2	7.1	4.7
Gas (cu. ft. per bbl.)	670	689	769	588	597	706	714	651	609

Properties of Gasolines

The gasolines resulting from the conversion of kerosene distillate are of high volatility and knock rating. The initial boiling points of the gasolines ranged from 86° F. to 91° F. and the end boiling points from 354° F. to 384° F. The knock ratings of these gasolines ranged between 59 and 64 per cent benzol equivalent, or expressed in terms of octane number, between 74 and 79, tested by a "Series 30" Ethyl knock-testing apparatus. The Ethyl standard motor fuel, using the same method of testing, corresponds to a 59 per cent benzol equivalent or 74 octane number.

The detailed data are recorded in the table:

CRACKED GASOLINES

Test No.:	1	2	3	4	5	6	7	8	9
A.P.I. gravity	61.1	60.4	61.0	61.7	62.1	62.8	61.4	63.6	63.1
Initial boiling point, ° F.	91	93	90	88	89	87	94	85	86
Per cent distilled over—	Temperature, ° F.								
20	176	182	182	182	178	171	189	171	181
50	248	264	264	266	255	250	268	248	257
90	324	340	352	344	336	334	350	336	336
End boiling point	370	364	384	366	364	354	383	355	358
Benzol equivalent, per cent	60	60	61	59	59	63	59	64	60
Octane number	75	75	76	74	74	78	74	79	75

A chemical analysis was made of gasoline from test three, which showed the following hydrocarbon content:

Hydrocarbon group—	Per cent
Unsaturated	37.0
Aromatic	29.3
Naphthene	14.2
Paraffin	23.5

This motor fuel was fractionated into 10 per cent cuts. Each of the fractions was subjected to analysis for volatility and knock rating in terms of benzol equivalent and octane number. The results are recorded in the table:

Fraction per cent—	A.P.I. gravity of fraction	I.B.P. ° F.	10%	20%	50%	90%	E.P. ° F.	% Benzol equivalent	Octane number	Cc.'s T.E.L. req.
0 to 10	91.0	48	69	81	115	...	230	too volatile		...
10 to 20	82.3	75	88	97	123	191	240	69	86	...
20 to 30	72.5	104	125	134	158	214	271	67	84	...
30 to 40	65.6	140	163	170	188	234	290	63	79	...
40 to 50	59.4	181	198	204	218	257	309	60	75	...
50 to 60	55.2	214	231	235	248	283	334	58	73	0.1
60 to 70	52.3	240	257	261	273	304	343	56	70	0.45
70 to 80	50.2	270	280	284	293	319	344	54	68	0.7
80 to 90	48.4	297	305	307	315	332	353	51	64	1.4
90 to 98	44.7	324	333	335	341	359	392	52	65	1.2
0 to 100	62.1	89	142	178	255	336	364	61	76	...

The cracked gasoline was also fractionated to endpoints of 248° F., 276° F., 298° F. and 325° F., in order to determine knock ratings in terms of benzol equivalent and octane number.

The results of these tests are shown in the table:

CRACKED GASOLINES

A.P.I. gravity	82.5	75.7	70.8	67.4
Initial boiling point and endpoint, ° F.	71–248	83–276	88–298	88–325
Benzol equivalent, per cent	(*)	68	67	65
Octane number	(*)	85	84	81

*Too volatile to test.

Blends of Gasolines

In view of the relatively poor knock ratings of straightrun Pennsylvania gasolines, a series of blending tests were made with cracked gasoline.

The results of distillation analyses and knock ratings of the blends are reported in the tables:

Straightrun, per cent	100	75	50	25	0
Cracked, per cent	0	25	50	75	100
A.P.I. gravity	61.5	59.9	59.1	58.9	58.4
Color	30	30	30	30	30
Initial boiling point, ° F.	100	116	112	107	95
Per cent distilled over—	Temperature, ° F.				
10	159	163	166	158	144
20	193	194	192	187	174
30	216	218	217	211	200
40	238	242	240	234	220
50	265	262	261	256	242
60	290	284	281	276	271
70	314	306	302	294	290
80	341	328	324	314	309
90	369	358	350	339	329
Endpoint	406	398	390	380	360
KNOCK RATINGS					
Benzol equivalent, per cent	33	45	49	56	61
Octane number	47	58	62	70	76
Cc. tetraethyl lead required to match Ethyl standard gasoline	6.1	2.6	1.8	0.45	(*)

*Better than Ethyl standard.

The residue from the cracking of kerosene is an excellent fuel, having a low cold test, low b.s., good viscosity and high B.t.u. content per barrel.

The properties of the flashed residues are given in the table:

Test No.:	1	2	3	4	5	6	7	8	9
A.P.I. gravity	6.7	8.8	8.6	11.5	7.5	6.1	10.3	8.4	...
B.s. and water, per cent	0.4	1.2	1..	...	0.8	...	1.2	...	...
Visc. Saybolt Furol at 122° F.	15	15	13	13.5	25	...	13	...	11
Flash (Cleveland)	165	155	150	140	165	...	141	...	125
Fire (open cup)	195	205	200	185	205	...	195	...	180
Flash Pensky Martin	...	135	130	125	...	...	95	...	85
Cold test, ° F.	...	(*)	—20	(*)	..	...	—30	...	(*)
Initial boiling point (A.S.T.M.)	388	360	344	392	380	370	360	362	360
Per cent over at 572° F.	39.0	49.0	46.5	45.5	39.0	34.0	47.0	36.0	51.0

*Below zero.

HOUSE COMMITTEE HEARING ON TARIFF

(Continued from Page 33)

is believed will enable us to determine its possibilities, and act accordingly. The logic of the control of importations apparently is irrefutable. In the United States today there are in the great oil producing states what are termed 'proration' laws, by virtue of which the production of oil is regulated and controlled. These proration laws in the different states preclude production except as directed. The strange spectacle is presented, therefore, of controlling and limiting within our own country the production of oil, and then permitting the importation in unlimited quantities of oil from foreign countries. The largest amounts of importations are from Venezuela, the Dutch West Indies, and Mexico.

Wants Equal Proration

"The producers in our own country are told exactly how much they may produce and, in fact, are limited to a mere minor fraction of their capacity for production; and yet a powerful or a rich oil company producing oil in a foreign country may itself import oil and its by-products without restriction or limitation. The bill now reported in small degree seeks to correct this inequality and injustice. The committee believes that if Americans within the limits of the United States are to be restricted in their production, no logical reason can be presented why one who is rich enough or fortunate enough to own oil lands and produce oil in other countries should not in like fashion be restricted in his importations into the United States.

"The story of distress in the oil fields is akin to that of the drought area. The distress of workers, their absolute want, their unemployment without fault on their part, all cry for such legitimate relief as may be extended by the Congress. The measure presented attempts this, and while it may not afford the fullest possible remedy, the majority of the Commerce Commission approve it as according some relief and as an endeavor to do tardy justice to our own people."

Hearing Date

Chairman Hawley of the Ways and Means Committee of the House of Representatives says that probably the committee will hear representatives of the oil conference on the pending bills for an embargo and for a tariff on oil Thursday, February 12.

Senator Thomas of Oklahoma received a promise from the Steering Committee to give the embargo bill precedence after the four bills given a similar status on the Senate calendar have been disposed of. That is, the Steering Committee will make a report to the Senate recommending that procedure. This action, while lending encouragement to the proponents of the Capper embargo bill, does not mean much in itself. The four bills that precede the embargo bill have been on the calendar with a like status for exactly one month today. The first of them is the Howell bill to make more drastic the prohibition laws as applied to the District of Columbia and that has been the subject of desultory debate whenever an appropriation bill or legislation unobjected to is not before the Senate. The truth is, they are known as the "buffer bills" to prevent legislation beyond the limit of appropriations and such personal bills as no one objects to.

Wirt Franklin, president of the Independent Petroleum Association is expected to arrive here next week, probably in time to attend the hearing before the Ways and Means Committee of the House of Representatives. In the meantime Russell Brown, secretary of the Governors' Oil Conference and others are busily engaged in preparing replies to numerous statements that were made before the Senate Commerce Committee against the passage of the Capper embargo bill. These statements will be presented to the Ways and Means Committee.

The resolution introduced by Senator Nye providing for an investigation of the oil industry is still in the committee to audit expenses of the Senate.

CURTIS J. PHILLIPS DEAD

The New York Times announces the death of Curtis J. Phillips, age 75 years, at the home of his daughter, Mrs. J. D. Wade, in Long Island City, N. Y. In its obituary notice the Times says deceased was a pioneer trader in the Osage Nation with headquarters in Pawhuska, Okla., following which he was in the oil business in the Oklahoma fields.

NEAL LUCEY DIES

HOUSTON, Tex., Feb. 9.—Neal Lucey, president of the Neal Lucey Co., died following an operation in Los Angeles, Calif. Mr. Lucey had been engaged in the oil field supply business for many years. Previous to the present company which he founded, he was with the Lucey Manufacturing Co. of Texas and the Southern Well Works.

NEW YORK STANDARD AND VACUUM HAVE 20 PLANTS

(Continued from Page 122)

manufacture and sale of the lubricating oils on a national and world-wide scale. These oils were refined at its two eastern refineries in the United States and those located in foreign countries. The company since 1928 has expanded both its refining and marketing facilities by acquiring controlling interests in the Lubrite Refining Co., Bartles-Maguire Oil Co. (including Wadhams Oil Co.), and the White Star Refining Co.

These companies all have a large number of station and dealer outlets in the territories surrounding their refineries. In addition, the Vacuum company has acquired controlling interests in a number of large jobbing interests in the middle west and eastern states.

The 20 operating refineries whose operations will be consolidated in the merger have a total crude oil capacity of 290,700 bbls. daily, with a cracking capacity of 118,000 bbls. daily. The plants are of various types and operate with practically all the grades of crude oil available in substantial quantities in the United States.

Both the Standard of New York and the Vacuum company are important factors in foreign refining and marketing operating directly and through subsidiary and affiliated companies.

WEST TEXAS FIELDS

(Continued from Page 64)

Falls district are now uniform; all refineries meeting the regular posted prices. Although the local refineries are paying posted prices for their oil they nevertheless have a clause in their bulletins stating that the producers will have to stand the difference where the gathering charges exceed 12½ cents per barrel.

The Wichita Falls district will also feel the influence of East Texas crude on the market, and the low prices for which the new high gravity sweet oil is selling are sure to tell on the North Central Texas demand which is in much the same geographical location as the Panhandle.

The Thurber Pipe Line Co. has completed its 4½ miles of 4-inch line out of the Jacobs Pool in southeastern Cooke County to a loading rack on the Texas & Pacific Railroad near Pilot Point, where the oil will be shipped to the Texas Pacific Coal & Oil Co.'s refinery in Fort Worth by tank car. This will give the pool its first outlet, and although the oil is of low gravity, running around 24.5 it is high in gasoline content, and valuable from that standpoint. The haul from Pilot Point to Fort Worth is only about 60 miles, making freight charges nominal.

COMPLETIONS IN WEST TEXAS

Crane County

Gulf Production Co.'s No. 90 McElroy, top pay 2,879 feet, shot 310 quarts 2,879-2,997 feet, initial production 310 bbls., total depth 3,001 feet.

Crockett County

Magnolia Petroleum Co.'s No. 2 Hoover, top pay 2,038 feet, initial production 11 bbls. per day, total depth 2,056 feet, temporarily abandoned.

Ector County

Skelly Oil Co. and Republic Production Co.'s No. 1 McKenzie, temporarily abandoned, total depth 3,750 feet, top pay 3,665 feet, increase 3,685-95 feet, initial production estimated 5 bbls. flowing before shot.

Irion County

Cromwell and other's No. 1 Tankersley, dry and abandoned, total depth 1,712 feet.

Pecos County

Bell and others' No. 1 Scharff & Blackman, top pay 1,600 feet, shot 30 quarts 1,600-12 feet and 20 quarts 1,585-92 feet, initial production 3 bbls. per day, total depth 1,624 feet. C. L. Dittman's No. 1 Eaton, top pay 1,618 feet, initial production 7 bbls. per day, total depth 1,634 feet. J. D. O'Mara and others' No. 1 Bennett, top pay 1,089 feet, plugged back to 1,185 feet, total depth 1,230 feet, temporarily abandoned. Stanolind Oil & Gas Co.'s No. 7 Tippett, top pay 405 feet, initial production 15 bbls., total depth 432 feet.

Reagan County

Big Lake Oil Co.'s No. 179 University, temporarily abandoned, total depth 4,003 feet. Big Lake Oil Co.'s No. 3-C University, top pay 8,380 feet, initial production 144 bbls. in 20 hours, total depth 8,923 feet.

Upton County

Humble Oil & Refining Co.'s No. 15 Ricker, top pay 2,177 feet, initial production 135 bbls., total depth 2,229 feet.

Winkler County

Jeffrey and others' No. 2 Brown and others, dry and abandoned, total depth 3,506 feet.

Fisher County

Cranfill & Reynolds' No. 3 Willingham, temporarily abandoned, total depth 3,090 feet. The Texas Company's No. 2 Stephens, show oil 3,257-3,261 feet, initial production 34 bbls. on pump, total depth 3,261 feet.

Jones County

Yingling and others' No. 1 Cade, oil show 2,546-2,555 feet, initial production 125 bbls. on pump, total depth 2,555 feet.

Crude oil shipments from West Texas fields. Report as of week ending February 7:

TRUNK LINE SHIPMENTS

Company and location—	Bbls.
Atlantic, Houston	31,080
Gulf, Ranger	35,491
Humble, San Angelo	32,714
Humble, Comyn	23,849
Illinois, Del Rio	36,438
Magnolia, De Leon	25,632
Pasotex, El Paso	15,756
Shell, Healdton	37,326
Shell, Houston	24,170
Texas, Houston	28,218
Total	290,674

TO WEST TEXAS REFINERIES

Big Spring, Big Spring	1,187
Burford Ref. Co., Pecos	3,873
Cosden Ref. Co., Big Spring	5,672
Col-Tex Ref. Co., Colorado	4,622
Humble, McCamey	3,077
Great Western, Big Spring	2,933
Tonkawa Ref. Co., Pyote	875
Wickett Ref. Co., Wickett	280
Total	25,519

TANK CAR SHIPMENTS

Big Lake from Texon	3,000
Fox & Thorsen from Mertzon	83
Thomas-Brann from Grant City	0
Santa Fe from Hurdle	55
Southern Crude Oil Pur. Co. from Wickett	14,144
Total	17,282
Total daily average distribution	333,475
Total daily average production (including Lea County, New Mexico)	285,319
Daily average from storage	48,156

COMPLETIONS IN NORTH CENTRAL TEXAS

Archer County

Seaberry and Burden's No. 1 Davis, dry and abandoned, total depth 1,403 feet. John Brownlee's No. 1 Threat, dry and abandoned, total depth 1,206 feet. Moran, Heydrick and Fischer's No. 1 Hason, dry and abandoned, total depth 980 feet.

Grayson County

F. H. E. Oil Co.'s No. 1 Uitger, dry and abandoned, total depth 969 feet. Guy Tucker and others' No. 2 Hanley and others, dry and abandoned, total depth 1,435 feet.

Wichita County

R. R. Clark and others' No. 9 Bickley, oil sand 849-64 feet, initial production 50 bbls., total depth 864 feet. R. R. Clark and others' No. 12 Bickley, oil sand 849-64 feet, initial production 50 bbls., total depth 864 feet. Lambert and Trout's No. 9 Overby, temporarily abandoned location. George J. Proctor's No. 3 Honaker, oil sand 847-49 feet, initial production 35 bbls., total depth 849 feet. George J. Proctor's No. 4 Honaker, oil sand 837-40 feet, initial production 50 bbls., total depth 840 feet. Rhoden and Bililie's No. 1 Honaker, location temporarily abandoned. Schlseke and Blair's No. 3 Honaker, oil sand 840-41 feet, initial production 45 bbls., total depth 841 feet. Walton and Blair's No. 5 Honaker, oil sand 851-56 feet, initial production 25 bbls., total depth 856 feet.

Young County

Arp and McClanahan's No. 1 Sanders, dry and abandoned, total depth 613 feet. Brazelton Brothers' No. 1 Teague, dry and abandoned, total depth 915 feet. F. H. E. Oil Co.'s No. 5 Finch Estate "C", oil sand 665-674 feet, initial production 400 bbls., total depth 675 feet. F. H. E. Oil Co.'s No. 6 Finch Estate "C," oil sand 662-75 feet, initial production 300 bbls., total depth 675 feet. Glover and Wall's No. 8 Johnson, dry and abandoned, total depth 525 feet. W. F. Hamilton's No. 7 Finch Estate, oil sand 656-70 feet, initial production 30 bbls., total depth 671 feet. W. F. Hamilton's No. 8 Finch Estate, dry and abandoned, total depth 730 feet. Hamilton and Helm's No. 2 Russell & Co., dry and abandoned, total depth 510 feet. King Royalty Co. and Bullington's No. 12 Graham, oil sand 695-702 feet, initial production 250 bbls., total depth 724 feet. George Mallenkoph's No. 1 Remington, dry and abandoned, total depth 720 feet. Seitz, Comegys and Seitz' No. 3 Finch Estate, dry and abandoned, total depth 737 feet. Wooden and Reed's No. 6 McBrayer and others, dry and abandoned, total depth 660 feet. Young Brothers and Terrell's No. 5 Larimore, oil sand 677½-80 feet, initial production 10 bbls., total depth 680 feet. Long and others' No. 1 Leslie, dry and abandoned, total depth 2,815 feet.

NORTH TEXAS PRODUCTION
Week Ending February 7, 1931

Panhandle district—	Bbls.
Carson County	3,700
Hutchinson County	8,845
Gray County	43,160
Moore County	320
Potter County	25
Wheeler County	350
Total this week	56,400
Total last week	59,491
Decrease	3,091
Wichita Falls district—	
Archer County	12,060
Baylor County	911
Clay County	595
Cooke County	1,975
Foard County	89
Jack County	1,235
Haskell County	19
Montague County	4,105
Throckmorton County	370
Wilbarger County	12,975
Wichita County	20,275
Young County	10,670
Total this week	65,279
Total last week	65,941
Decrease	662
Ranger district—	
Brown County	4,055
Callahan County	2,175
Coleman County	1,680
Comanche County	940
Palo Pinto County	409
Eastland County	3,367
Shackelford County	4,224
Stephens County	4,632
Total this week	21,482
Total last week	21,506
Decrease	24

COMPLETIONS IN PANHANDLE DISTRICT

Gray County

Adams and McGahay's No. 5 Morse, shot with 20 quarts from 2,580-90 feet, second shot of 170 quarts from 2,628-75 feet, initial production 125 bbls., total depth 2,675 feet. Smith's No. 1 Morse, top pay 2,735-95 feet, initial production 1,500,000 feet of gas, total depth 2,892 feet. Mazda Oil Co.'s No. 1 Combs & Worley, top pay 2,924-42 feet, initial production 2,470 bbls. oil and 9,000,000 feet of gas, total depth 2,958 feet.

Hutchinson County

Magnolia Petroleum Co.'s No. 1 Herring, 4,000,000 feet of gas at 2,755-2,898 feet, total depth 2,904 feet.

COMPLETIONS IN RANGER DISTRICT

Brown County

Ralph Lockwood's No. 1 Boysen, oil sand 402-23 feet, initial production 1 bbl., total depth 435 feet.

Comanche County

Kirk and others' No. 1 Kirk, shot with 80 quarts from 2,568-93 feet, initial production 35 bbls., total depth 2,808 feet.

Coleman County

Eastland Oil Co. and others' No. 1 Cannon, dry and abandoned, total depth 1,617 feet. Agnew and Sons and others' No. 5 Sewitzer, initial production 75 bbls., total depth 1,437 feet. Paul H. Davis Co.'s No. 2 Overall, gas sand 900-05 feet, plugged back to 932 feet, initial production 1,000,000 feet of gas, total depth 939 feet. Guffey Brothers' No. 1 Lovelady, dry and abandoned, total depth 800 feet.

Eastland County

Hickory Oil & Gas Co.'s No. 1 fee, shot with 80 quarts from 3,503-43 feet, initial production 90 bbls. oil and 500,000 feet of gas, total depth 3,543 feet. Hoffer Oil Corp. and others' No. 1 Fleming, temporarily abandoned, total depth 3,008 feet.

Palo Pinto County

McLester Oil Co.'s No. 3 Wilbar, gas sand 1,673-83 feet, initial production 1,170,000 feet of gas, total depth 1,687 feet.

Stephens County

Hanlon Gas Co.'s No. 3 Milam, dry and abandoned, total depth 4,111 feet. Hickok Producing & Refining Co.'s No. 4 Hamel dry and abandoned, total depth 4,166 feet. Lone Star Gas Co.'s No. 1 McKelvain, dry and abandoned, total depth 3,890 feet. Urban and others' No. 6 Riddle and others, gas sand from 1,961-74 feet, initial production 10,810,000 feet of gas, total depth 1,974 feet.

REFINERS INCREASE USE OF NATURAL GASOLINE

(Continued from Page 121)

on a large scale has aided in the utilization of greater volumes of natural gasoline.

Inland Louisiana and Arkansas also show a high percentage of natural gasoline used at refineries and the low gravity of much of the crude refined in this area explains why the use of natural gasoline is comparatively high.

Contrasted with the figures shown for these areas are those for the East Coast and the Appalachian group. Here the proportion of natural gasoline is 4.1 and 3.6 per cent, respectively. In these cases, the lesser use of natural gasoline may be attributed to the high cost of transporting the material to the refineries from the distant producing fields, the high gravity of the gasoline made from Pennsylvania crude and the large amount of cracking done among the Atlantic Seaboard refineries. The large eastern plants have also installed effective vapor recovery systems and have limited their purchases of natural gasoline to the more stabilized grades so the quantity used has been proportionately less.

The Indiana group and the Oklahoma group of refineries assume an intermediate position. In both cases, however, there has been an increase in the percentage of natural gasoline used in the blend. The following table shows the volume of natural gasoline used by refiners in the various refining groups during 1930 and 1929 and also shows the percentage of natural gasoline in the total refinery production.

TRADING CONTINUES LIGHT IN OKLAHOMA

(Continued from Page 28)

cepted requirements as to chemical purity and distillation range is not enough. A gasoline with a low antiknock value is viewed by most buyers as being undesirable in the same sense that it would be if its sulphur content was excessive, its odor bad or its endpoint high.

The changes in engine design in which many cars knock with most straightrun grades of gasoline refined from paraffin or mixed base crude oils is responsible for this condition. The emphasis placed on Ethyl Gasoline and other brands of high antiknock motor fuels reflects this situation in which the consumer has become discriminating as to his gasolines, bringing constant changes in refining and marketing methods.

Discussing this situation, one refinery executive said that just as soon as a standard method of determining the knock rating of motor fuels can be worked out and approved by the Government and other recognized testing agencies, the low antiknock gasolines will be recognized as "off-brand products" and sold as such. If this prediction materializes, it is apparent that the small skimming plants in flush pools will be at a disadvantage when competing with the larger refineries that have the facilities to manufacture and blend motor fuels which meet all the requirements of the consuming trade.

Gasoline and Naphtha

The Texas Company, which last week

was reported to have bought approximately 200 cars of 60-62, 400-endpoint gasoline, mainly from North Texas refiners, continued to purchase, and the first of this week the total had been increased to 500 cars for February delivery. Oklahoma, and at least one Kansas refiner, shared in the purchases of the past week. The purchases are reported to have been made on a basis of 6¼ and 6⅜ cents, North Texas.

Most of the refiners who are sharing in this business do not ordinarily make a 400-endpoint gasoline for domestic shipment. These refiners are changing their plant operations to provide for the special grade until their order is filled.

Except for The Texas Company order, there was no special buying of gasoline in Oklahoma or any other refining group of the Mid-Continent. Jobbers who buy in the spot market have been flooded with offers of U.S. Motor gasoline for immediate delivery and over the next 60 days. Resale material has been freely available at 4 and 4⅛ cents for delivery over February, and the first of the week offers under the 4-cent figure were reported. In sales to the trade, most refiners were quoting 4¼ to 5 cents.

The Texas Company purchase served to hold the 60-62, 400-endpoint grade at last week's level. Sales of 390 endpoint were being made as low as 4½ cents and 375, 4⅝ cents. These grades were moving slowly.

The few makers of naphtha have reduced their prices and the 50-52, 450-endpoint grade was available at a low of 4 cents the first of the week.

Kerosene

The kerosene situation is getting worse instead of better. The spring demand has not materialized in sufficient volume to absorb the material that is freely offered.

It is pointed out in this connection that several of the larger refiners are now offering the tractor trade a special grade of distillate at prices slightly under the going kerosene market. This has replaced a large part of the normal kerosene outlet in several sections of the Middle West. The largest factor in that area is reported to be actively pushing the sale of a 38-40 gravity distillate as tractor fuel. This product is prime white and gives satisfactory service with tractors.

One bearish development of the past week was the reported offer of keresone at a flat price of 2½ cents over the remainder of the year, starting in April. This offer is said to come from a company which is building a refinery in East Texas. The East Texas crude will give a large yield of from 10 to 15 per cent kerosene, and if several refineries are built in that section, the kerosene supply in the Mid-Continent will be materially increased.

Oklahoma prices to the trade continued at a low of 3 cents for the 41-43 water white grade and 4¼ cents for the 42-44.

Natural Gasoline

Prices on natural gasoline held the past week with the exception of the BB and C grades, which dropped from 3¼ to 3 cents. The AA grade was 3½ cents and Grade A 3¾ cents. Buying was not heavy, but the supply is limited and distress material has not become an important market factor.

Fuels

The general fuel situation has already been outlined. Low cold test fuel oil, gas oil and distillate are moving slowly, and a few refiners have shaded prices to get orders. The 28-30 zero was freely offered at 85 cents the first of the week, and one sale of higher cold test material was reported at 80 cents. Low cold test grades with gravity as high as 26 were not in demand at 60 to 65 cents.

Although industrial and U.G.I. gas oil was not selling under 2 cents in Oklahoma, it was quoted on a Group 3 basis under that price. Some high cold test gas oil has been sold in Texas and other points under 2 cents for cracking.

The furnace oil grades of gas oil and distillate start at low of 2⅝ cents, with a high of 3 cents, depending on gravity, flash, cold test and color. All grades are available at lower prices than prevailed last week.

Lubricants

Two lubricating oil manufacturers in Oklahoma reported a better demand for neutral oils and finished motor oils the past week. It was explained as due to the approach of the spring and summer season when the consumption of oils increases. Outside of these two reports, no change was apparent in the demand and prices for neutral oils, steam refined stocks and bright stocks. Refiners were endeavoring to maintain a low of 2 cents for 124-126 wax, and more inquiries were reported.

SOCONY-VACUUM MERGER IS UPHELD BY COURT

(Continued from Page 31)

oly. In a sense any elimination of competition is a movement in the general direction of monopoly. But competition is, in its very essence, a contest for trade and any progress or victory in such contest must lessen competition.

Seed of Destruction

"Competition must always bear in itself the seed of its own alteration or even destruction. Success in business is ordinarily success in competition and such success is a usual incentive to business effort and is, of itself, commendable. It is only when this lessening is with an unlawful purpose or by unlawful means or when it proceeds to the point where it is or is threatening to become a menace to the public that it is declared unlawful. At that point the public protects itself.

"Whether a restraint is undue or unreasonable is, of course, dependent upon the facts of each particular case and requires the application of sound judicial common sense as to existing conditions and as to evidence or probable results and cannot be defined, except generally.

"It is conceded and is obvious that whatever competition exists or would probably arise between these companies will be entirely eliminated by this merger.

"It is fair to say that there is little real substantial intercompany competition existing in the United States shown in three (kerosene, fuel, diesel, gas and furnace oils and miscellaneous products) of the five classes of petroleum products.

"As to the other two products (gasoline and lubricants), there is active competition in Western and Central New York, there is competition of varying intensity in automobile lubricants in every state (twenty-nine) where Socony sells such, and there is substantial competition in three types of industrial oils in New York and New England and to a less degree in one type in the Southwest.

"In this case there is an unusual situation affecting future competition which will very probably influence the development of these two businesses. This feature is the rather pressing urge for expansion of the business."

Control of Outlets

The opinion said the trend in the industry laid special emphasis on control of outlets to automobile users. Socony has more crude production than it can refine or market and needs marketing outlets, while Vacuum's outlets have been reduced by other integrated companies selling their own lubricants.

"It is clear there are sound business reasons for this merger which are entirely sufficient and are wholly unconnected with any design to create a monopoly."

Attention was called to the fact that the Royal Dutch-Shell and its subsidiaries are developing business on a great scale in the United States, saying in 1929 it produced 229,379,000 bbls., or more than 15 per cent of the total world production of 1,488,604,000 bbls.

In the United States, it is said the combined output of Socony and Vacuum bears a relation to total production of 4.5 per cent crude, 7 per cent refining capacity, 8.9 per cent gasoline, 8.5 per cent kerosene, 7.3 per cent fuel, Diesel, gas and furnace oils, 12.8 per cent lubricants, and 7 per cent miscellaneous.

Reviewing Socony's extensive trade in New York and New England states, the opinion said that while it has more business there than any other companies, yet competition of all kinds has thriven.

Answering the Government's contention Socony controlled gasoline prices in those localities, the opinion stated:

"Because Socony is a financially strong integrated company, it has a distinct advantage in protection of the prices it may see fit to make if those prices are reductions. If they are increases there seems no reason why other major companies or other distributors or retailers should follow unless business reasons aside from any idea of compulsion, suggest such be done.

'Compulsion' Avoids Price War

"There is no element of compulsion or attempt at compulsion present, although it is as contended proof of its business power in this State. If the major companies follow the Socony prices in this area they do so because they do not wish to engage in a price cutting war which might entail losses to all concerned without any compensating benefits.

"Such a view has no sinister aspect but is merely a matter of business judgment and prudence illustrated in every community in the country by retail competitors in all lines.

"The Government argues that to hold this merger lawful will result in nullifying the effect of the main decree dissolving the old unlawful combination. The argument is that allowance of this merger will result in other of the parties to the old combination making mergers so that ultimately the old combination will in effect be recreated.

"It is not claimed the present merger is a step in pursuance of a plan to bring about such ultimate result and the evidence is strongly that no such design exists. If it were present this merger would be readily forbidden."

FURTHER EXPANSION OF TAUBMAN IS ANNOUNCED

The Taubman Supply Corp., Tulsa, whch a few months ago moved into larger quarters and became exclusive Mid-Continent factory representative for the Chapman Valve Manufacturing Co., Indian Orchards, Mass., announced further expansion this week through installation of an engineering department and becoming representative for additional oil field equipment manufacturing companies. Hereafter the Taubman company will distribute the electric-welded pipe and other goods of the Republic Steel Corp., Youngstown, Ohio; the seamless casing, tubing and drill pipe of the Pittsburgh Steel Products Co., Pittsburgh, Pa.; the forged steel valves of the Edward Valve & Manufacturing Co., East Chicago, Ind., and the fittings made by the Stockham Pipe & Fittings Co., Birmingham, Ala.

The engineering department established is in charge of John M. McGregor, formerly sales engineer for the pump division of the Byron Jackson Co. This department plans to provide data to customers on pipe line and pump station work. The company has booked an order to provide valves for the Great Lakes gasoline line.

The Taubman company, which began business 11 years ago handling used pipe, now has 12 branch offices. Two of these, in Kilgore and Longview, Tex., were opened recently to serve the East Texas fields. The others are in Oklahoma City, Seminole, and Konawa, Okla.; Borger and Wink, Tex., and Wichita, McPherson and Hugoton, Kans.

PANOLA POSTS PRICE

The Panola Pipe Line Co. on Tuesday, February 10, posted a flat price of 40 cents per barrel for oil it purchases in Rusk County, Texas. None of the large purchasing companies has posted a price in Rusk County.

DEATH OF HUBERT MAY

Hubert May, a partner in the firm of A. Beeby Thompson & Partners, London, England, died in London on January 16.

Although only 54 years of age his death removes one of the pioneers of British petroleum technology.

Late Fields

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shut in and may be completed at the present depth.

The wildcat test of the Atlantic Oil Producing Co. and others' No. 1 Fixico, NW cor. SE Section 15-11-8, north of the Cromwell Field, in Seminole County, was drilled deeper and found a hole full of water from 3,523-29 feet and will be abandoned.

KANSAS

The fourth new oil area in Rice County, Kansas, was found in Muth Brothers' No. 1 Beyers, NE cor. NW Section 21-19-9w, a wildcat test. Silicious lime was found at 3,213 feet and the test was drilled to a total depth of 3,244 feet. The oil increased at 3,235-44 feet and rose 3,000 feet in the hole in nine hours. In nine hours on the swab, the well produced 200 bbls.

In the Ritz area in McPherson County, a 2-mile extension was assured by the Darby Petroleum Co.'s No. 1 Kaegi, NE cor. Section 20-19-1w, which was making 9,000,000 feet of gas from the chat at 2,935-49 feet. The total depth of the hole is 15 feet higher than where production is usually found in the area.

GULF COAST MARKETS WITHOUT MUCH CHANGE

HOUSTON, Tex., Feb. 9.—Gulf Coast refinery markets again reflected no important changes with all prices apparently pegged. In the face of a rather inactive demand, sellers seem to be in a position to hold firmly to previous quotations. Considerable material is moving out for the Atlantic Seaboard but in most cases this is through established channels and is not to be confused with sales on the spot market.

CONSTRUCTION STARTED ON RUSK CO. REFINERY

Beacon Oil & Refining Co. is building a skimming plant of 2,000-bbl. daily crude oil capacity 2 miles north of Henderson, in Rusk County, Texas, on the I.&G.N. Railroad line and the highway. The company is also building a 4-inch gathering line from the Joiner Field to a 40-car loading rack at the refinery. James E. Parker is president of company, and H. W. Roberts is secretary-treasurer and general manager. Mr. Roberts is owner and general manager of the Falls Refining Co., which has a 2,500-bbl. skimming plant at Wichita Falls, Tex.

LAKE PETROLEUM CO. MOVED

CHICAGO, Feb. 7.—The Lake Petroleum Co. is now located at its new address on the thirty-third floor of the Willoughby Tower, 8 South Michigan Avenue, where it takes over some part of the space formerly used by the Cosden Oil Co. of Illinois, whose offices have been removed to the new bulk plant at 1300 Webster Avenue.

MAGNOLIA P. L. STATEMENT

The Magnolia Petroleum Co.'s pipe line statement for January reports crude oil runs from the Oklahoma and Kansas fields of 1,716,263 bbls., daily average 55,363 bbls.; shipments 1,624,584 bbls., daily average 52,406 bbls.; stocks 5,815,317 bbls.

PRAIRIE P. L. SHIPMENTS

The Prairie Pipe Line Co.'s crude oil shipments in January were 2,207,391.55 bbls., a daily average of 71,206 bbls. This was an increase over the December shipments of 6,871 bbls. per day.

R. J. FITZGERALD DIES

R. J. Fitzgerald, independent operator of San Angelo, Tex., died at his home in that city. Mr. Fitzgerald drilled the first wildcat well in Tom Green County.

BETTER FEELING SHOWN IN THE EASTERN MARKET

(Continued from Page 119)

and there is no speculative interest shown by jobbers in any products under present market conditions.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended January 31 totaled 1,371,000 bbls., a daily average of 195,857 bbls., compared with 2,012,000 bbls., a daily average of 287,429 bbls. for the previous week and a daily average of 249,650 bbls. for the four weeks ended January 31. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	46,000
Boston	91,000
New York	909,000
Philadelphia	142,000
Others	77,000
Total	1,259,000
Daily average	179,857
At Gulf Coast ports—	
Port Arthur and Sabine district	65,000
Tampa	47,000
Total	112,000
Daily average	16,000
At all United States ports—	
Total	1,371,000
Daily average	195,857
Daily average four weeks	249,750

Distribution of total imports is as follows:

Crude	939,000
Gasoline	40,000
Fuel oil	392,000

Tanker Market

"The tanker market was exceptionally quiet during the early part of the week but some activity later developed with several fixtures for clean and dark oil trades," say Funch, Edye & Co. in their weekly market summary. "A large clean Norwegian Diesel, which has been laid up in California for some time has at last been successful in obtaining a cargo to China and two vessels were placed in the whale oil trade, otherwise Black Sea shippers did the bulk of this week's business.

"American charterers are still open for a clean vessel to South America, but there is very little demand in any direction for clean tonnage. Black oil vessels can be placed for transatlantic trading March/April. The time charter market is lifeless and no creosote is offering. The American coastwise and interconstal markets are again quiet with no demand."

Fixtures for the week were as follows:

Dan Stmr Anna Maersk, 8,750 tons d.w., whale oil, Whaling grounds/Europe, p.t., February.

Nor Motorship Deodata, 4,200 tons d.w., lubricating oil, Batoum to St. Louis du Rhone, £1,650 lump sum, February.

Fr Stmr Melpomene, 10,210 d.w., clean, about 9,000 tons, Constanza to two ports French Atlantic, 8/-, April.

Ger Stmr Nord Atlantic, 6,730 tons d.w., whale oil, six months time charter, whaleoil depot ship Fredriksstad, about £300 per month, April.

Ger Stmr Karl Leonhardt, 7,500 tons d.w., gas or lubricating oil, Constanza to one port French Atlantic 11/-, February 15/March 15.

Nor Motorship Orkanger, 11,000 tons d.w., clean, San Pedro to Shanghai, 33c, prompt.

MOST OF CHICAGO BUSINESS ON CONTRACT

(Continued from Page 118)

erage cut price station. It is something about their way of doing business that appeals to the motoring public.

The necessity for stations being so close together is not apparent. A motorist does not take his can and make a trip to the nearest station to buy his gasoline and bring it back and empty it into his car but drives the car itself to the station and so far as his personal convenience is concerned it makes little difference if the station is 1 block or 1 mile distant. Some of these older companies will probably hang on to their small stations until some large company begins to distribute through larger stations to which it can deliver its supplies in tank car rather than truck. There is not a man who looks into the distributing end of the business who is not impressed with the success being made by these trackage stations.

MARKETERS MOBILIZE TO PRESERVE CODE

(Continued from Page 33)

petroleum industry's code of ethics that the trade body has withdrawn its moral support from the suppression of unfair and uneconomic (though not necessarily unlawful) practices, and that in future the only assistance the industry may expect from the commission is prosecution on actual law violations, with which duty the commission has always been charged.

The outstanding provision of the Federal Trade Commission Act is that "unfair methods of competition in commerce are hereby declared unlawful." Discretion is given the commission in determining in the first instance what is or what is not an unfair method of competition in accordance with the practices, usages and customs peculiar to a particular industry or business. The latest ruling by the commission, however, would indicate that that body in future will refuse to exercise its discretionary powers for the protection of the petroleum industry.

As the situation stands at present, the only actual results of the petroleum industry's gigantic effort to stabilize its marketing operations through the adoption of an ethics code is the awakening of the industry's consciousness to the many abuses which had crept into marketing practices, against which must be balanced an expenditure in time and money that runs into impressive figures.

With the entire industry mobilizing in protest at the commission's action, however, it is strongly felt that the code will be preserved either by individual action or by congressional action looking toward modification of the Federal Trade Commission Act to put that body in legal possession of the powers necessary for the fulfillment of its promises to industry. With 16,000 signatories to the code in all parts of the country, it is not considered improbable that necessary congressional action can be secured with the co-operation of all of these factors in the industry in bringing to the attention of their congressmen and senators the need for real co-operation with industry by the Federal Trade Commission.

Postponement Requested

Mr. Boyd's letter to the commission follows:

"The American Petroleum Institute, on behalf of the petroleum industry of the United States, hereby petitions the Federal Trade Commission to hold in abeyance the action taken by the commission on January 30, 1931, concerning proposed changes in the trade practice conference rules of the petroleum and petroleum products industry heretofore approved by the commission, and asks that the effective date of said order be postponed for a period of 60 days from the date hereof.

"This application is based upon the fact that the petroleum industry, prior to the commission's letter and announcement of February 2, 1931, had received no notice whatsoever of any action or contemplated action on the part of the Federal Trade Commission to rescind its approval of the rules mentioned or to reconsider or revise any of said rules.

"This 60 days' stay is requested in order to permit the petroleum industry to arrange and hold a national conference of those engaged in marketing refined petroleum products and to submit, thereafter, its objections in writing to the proposed said rules by the Federal Trade Commission."

Commission's Report

For the first time since its general reconsideration of all rules adopted by industries at trade practice conferences held in the last few years, the Federal Trade Commission announces its action on the rules adopted by one of these groups, the petroleum and petroleum products industry.

The petroleum group held its conference in St. Louis, February 11, 1929, and announcement of the commission's first action on its rules appeared July 25, 1929.

Current action of the commission leaves but three rules in force as compared to the original 21, and these three are Group 1 rules. The original language was retained in but one of the three; the other two rules were revised. Four other Group 1 rules out of a total of seven were rejected.

All of the 14 Group 2 rules were rejected.

The commission directs that approval of the reconsidered and amended rules be made conditional upon acceptance by the industry of the commission's changes and that the industry be notified of the commission's action with the request that it advise the commission of the industry's action within 60 days.

Group 1 rules, Nos. 1, 2 and 3, relating, respectively, to loaning or leasing of equipment, leasing of service and filling station sites, and painting over signs or colors of another company, were rescinded and stricken out.

The fourth rule in Group 1 covering breach of contract was rescinded and a new rule substituted, reading as follows:

"Maliciously inducing or attempting to induce the breach of existing contracts between competitors and their customers by any false or deceptive means whatsoever or interfering with or obstructing the performance of any such contractual duties or services by any such means with the purpose and effect of unduly hampering, injuring or embarrassing competitors in their businesses is an unfair trade practice."

The fifth Group 1 rule, relating to the proper marking of aboveground equipment, was rescinded and stricken out.

Rule 6 on the subject of lotteries was approved without change. The text is as follows:

"Lotteries, prizes, wheels of fortune, and/or other games of chance shall not be used in connection with the sales of gasoline or motor oils."

Rule 7 on the selling of goods below cost was rescinded and substituted therefor was the standard selling below cost rule, which is as follows:

"The selling of goods below cost with the intent and with the effect of injuring a competitor and where the effect may be to substantially lessen competition or tend to create a monopoly or to unreasonably restrain trade, is an unfair trade practice."

The Group 2 rules reconsidered, rescinded and stricken out, related to such subjects as supplying petroleum products to airports, extension of credit by lessors of equipment, construction of service station facilities by wholesalers for retailers, use of advertising devices, and other features of the sale and distribution of petroleum products.

Full texts of the rules adopted by the industry February 11, 1929, and amended and approved by the commission as of July 25, 1929, are reproduced for com-

REFINERS CONTINUE CURTAILMENT OF RUNS

(Continued from Page 30)

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Feb. 1	Runs Jan. 1
Allstate Refining Co., Thrall	3,000	2,200	1,600
American Refining Properties, Wichita Falls	6,000	3,000	3,400
Archer Refining Co., Megargel	2,000	650	650
Central Texas Refining Co., Angus	4,000	(*)	(*)
Central Texas Refining Co., Minerva	2,000	600	700
Continental Oil Co., Wichita Falls	6,000	2,000	3,000
Dale Oil & Refining Co., Electra	4,000	3,200	3,400
Deer Oil Corp., Brownwood	2,000	(*)	(*)
Dixon Creek Oil & Refining Co., Kingsmill	4,000	3,200	1,800
Empire Oil & Refining Co., Gainesville	5,000	3,600	3,600
Falls Refining Co., Wichita Falls	2,000	1,000	1,000
Gulf Refining Co., Fort Worth	10,000	6,000	6,000
Humble Oil & Refining Co., Breckenridge	2,000	800	700
Humble Oil & Refining Co., Chilton	4,000	600	700
Humble Oil & Refining Co., Neches	5,000	(*)	1,240
Iowa Park Producing & Refining Co., Iowa Park	2,500	2,000	1,700
LaSalle Petroleum Co., Burkburnett (Noble)	3,500	(*)	(*)
Macmillan Petroleum Co., Isom	8,000	6,000	5,000
Magnolia Petroleum Co., Fort Worth	12,000	4,500	4,200
Magnolia Petroleum Co. (White Eagle plant), Fort Worth	6,000	3,500	3,000
Magnolia Petroleum Co., Corsicana	5,000	4,200	4,200
Marathon Oil Co., Fort Worth	5,000	3,400	3,000
Muenster Refining Co., Muenster	300	25	(*)
Olney Oil & Refining Co., Olney	2,500	2,500	2,100
Oriental Oil Co., Dallas	5,000	500	600
Orient Petroleum Co., Wichita Falls	2,500	(*)	1,500
Panhandle Refining Co., Wichita Falls	5,000	3,500	4,250
Petroleum Refractionating Co., Pampa	5,000	5,250	5,000
Phillips Petroleum Co., Isom	15,000	10,800	10,000
Primrose Refining Co., Wichita Falls	2,500	2,000	2,000
Simms Oil Co., West Dallas	5,000	2,000	2,000
Southland Refining Co., Olney	1,000	200	500
Star Refining & Producing Co., Fort Worth	1,800	500	500
Superior Refining Co., Tiffin	2,000	200	1,000
Tarrant Petroleum Co., Grand Prairie	2,500	(*)	(*)
Taylor Refining Co., Taylor	6,000	3,500	3,300
Taxman Refining Co., Wichita Falls	2,500	2,500	2,300
The Texas Company, Dallas	16,000	15,000	16,000
The Texas Company, Amarillo	4,000	3,000	4,000
Tidal Western Refining Co., Burkburnett	3,000	1,500	2,000
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	1,800
Texas Pacific Coal & Oil Co., Caddo	1,200	800	450
Waggoner Refining Co., Electra	3,400	(*)	1,400
Wilcox Oil & Gas Co. (Pampa Refining Co.), Pampa	4,000	2,500	2,500
Total	196,200	108,725	112,115

*Shut down.

REFINERY OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Feb. 1	Runs Jan. 1
Bayou State Refining Co., Hosston	750	500	500
Crystal Oil Refining Corp., Shreveport	14,000	(*)	(*)
Louisiana Oil Refining Co., Shreveport, Bossier	24,000	13,900	17,700
Shreveport-El Dorado Pipe Line Co., Shreveport	10,000	6,500	5,800
Standard Oil & Gas Co., Superior	3,500	3,000	2,800
The Texas Company, Shreveport	7,000	(*)	(*)
Total	59,250	23,900	26,800

*Shut down.

REFINERY OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year)

Company and location—	Daily capacity	Runs Feb. 1	Runs Jan. 1
James H. Berry & Sons, Waterloo	2,000	1,200	1,200
Henry H. Cross Co., Smackover	6,000	4,000	4,000
Houston Oil Co., Camden	6,000	(*)	3,100
Kettle Creek Refining Co., Pearson	5,000	1,700	1,700
Lion Oil & Refining Co., El Dorado	12,000	6,000	6,000
Macmillan Petroleum Products Co., Norphlet	1,800	1,550	1,500
Ouachita Valley Refining Co., El Dorado	2,000	1,000	1,000
Root Refining Co., El Dorado	10,000	5,650	5,650
Simms Oil Co., Smackover	3,000	2,000	2,000
Total	47,800	23,100	26,150

*Shut down.

parison with the current action, as follows:

Original Rules

(Rules appearing in Group 1 were affirmatively approved by the commission; those in Group 2 were received as expressions of the trade.)

Group 1

Group 1 (formerly part of Resolution 1)—The practice of loaning or leasing gasoline pumps, tanks, and other equipment is unsound and uneconomic, and should be discontinued at the earliest possible moment, consistent with existing conditions. Until such time as this situation can be brought about, and only in those states in which the practice is now observed, gasoline or kerosene pumps and tanks, motor oil equipment and grease outfits (the grease outfits not exceeding in cost $50 each) may be loaned or leased for the exclusive storage and handling of the products of the lender or lessor, but the borrower or lessee shall not be prohibited from handling in other equipment the products of another supplier. Where no equipment is at present installed by any company, or where additional equipment may be added to existing locations, the borrower or lessee shall be required to pay for the installation of each loaned or leased equipment the actual cost of installing said equipment, and for this purpose shall make a cash deposit of at lease $100 in advance for each underground unit to be installed, and shall pay, as or when due, all privilege taxes attaching because of the installation or maintenance of such equipment.

(Note by commission: That part of this rule which relates to handling, by the borrower of equipment, of the products of a supplier other than those of the lender of the equipment is approved as a Group 1 rule—the other portions of the rule being treated, independently, as belonging in Group 2.)

Rule 2 (formerly Resolution 8)—Refining companies, wholesalers, distributors, and/or jobbers may acquire by bona fide leases or subleases, service and filling stations or sites for same, and such stations and/or sites may be leased or licensed by such company to dealers for the purpose of distributing its products. Such stations and/or sites shall not be acquired at one rental and then subleased or licensed at a reduced rental for the purpose of rebating. In the event the company makes improvements to such properties prior to subleasing same, such sublease shall provide in addition for reasonable return upon the cost of such improvements, in order that the transaction may not result in rebating.

Rule 3 (formerly part of Resolution 8)—No company shall paint over any signs or colors of another company until it has communicated with the company whose signs or colors are involved, inquiring whether or not the latter company has any written contract which would be violated by the proposed painting. The latter company shall respond promptly, giving the information requested; and if it holds a contract which would be violated, shall offer to submit it for inspection at its office. If the contract so submitted discloses that the proposed painting would constitute a breach of the contract, the painting shall not be done.

Rule 4 (formerly Resolution 14)—No refiner, distributor, jobber, or wholesaler shall knowingly, induce, attempt to induce, or assist a party to break an existing written contract for the sale of petroleum products between that party and another.

Rule 5 (formerly Resolution 15)—All aboveground equipment for refined products shall bear in a conspicuous place the name or trade-mark of the owner or lessor, and no refiner, distributor, jobber, wholesaler or retailer shall knowingly deliver into such equipment any refined product other than the brand designated, or in any way be a party to the substitution of one grade or brand of refined products for another.

Rule 6 (formerly Resolution 17)—Lotteries, prizes, wheels of fortune, and/or other games of chance shall not be used in connection with the sales of gasoline or motor oils.

Rule 7 (formerly Resolution 20)—The selling of refined petroleum products below cost for the purpose of injuring a competitor, and with the effect of lessening competition, is an unfair trade practice.

Group 2

Rule 8 (formerly part of Resolution 1)—On account of the special nature of service in supplying petroleum products to airports, no dispensing or storage equipment of any kind shall be leased, loaned, or otherwise furnished, to airport operators or resellers of petroleum products, except at full cost, including cost of equipment and storage installation.

Rule 9 (formerly Resolution 2)—A lender or lessor of equipment shall neither extend credit to the borrower or lessee for installation costs, nor advance money to him to cover payment of privilege taxes, or any other expense in any manner related to the installation of loaned or leased equipment.

It is not the intention of Rule 1 and Rule 9 (formerly Resolution 2) to require the payment of installation costs from the borrower or lessee for exchanges and/or substitution in existing equipment on locations where gasoline, kerosene or lubricating oils are being sold upon the date of the Federal Trade Commission's approval of this code. The privilege of exchange or substitution of equipment is declared to extend to all dealers not merely to the original lenders.

Rule 10 (formerly part of Resolution 3)—Except as may be provided in Rule 2 (formerly Resolution 8), refiners, wholesalers, distributors and/or jobbers shall not construct for retailers any driveways, canopies, sheds, greasing pits, building or other structures; do painting other than their standard signs or loaned equipment; make improvements to existing structure or facilities; nor furnish or loan air compressors, greasing lifts or racks, or other things of value except equipment stated in Rule 1 hereof, nor bear any part of the expense of construction work on the premises of resellers, nor loan money for the same.

Rule 11 (formerly Resolution 4)—No equipment except trade-marked pump globes and other standard advertising devices shall be loaned to tank car buyers and/or distributors.

Rule 12 (formerly Resolution 5)—Refiners, distributors, jobbers, and/or wholesalers shall not pay rentals or make any allowance for the privilege of installing pumps and tanks, or for displaying advertising on premises where refined products are sold.

Rule 13 (formerly Resolution 6)—Refiners, distributors, jobbers, and/or wholesalers shall not rent from any dealer or consumer any delivery equipment, and shall not purchase from any dealer or consumer any delivery equipment for more than its actual value.

Rule 14 (formerly Resolution 7)—Refining companies, wholesalers, distributors, and/or jobbers may own service and filling stations or sites for same, and may lease such stations and/or sites to dealers for purposes of distributing its products, provided that such leases shall stipulate for a reasonable return to the lessor upon the then fair value of the property for filling station purposes.

Rule 15 (formerly Resolution 18)—Gasoline shall not be sold from tank wagons or trucks to other motor vehicles except in emergency cases.

Rule 16 (formerly Resolution 16)—No oil or other thing of value shall be given away, or special inducement granted, on opening days, special sale days, or other occasions.

Rule 17 (formerly Resolution 9)—All refiners, distributors, jobbers, and wholesalers shall conspicuously post, at each point from which they make delivery, the several posted prices of gasoline and kerosene for each class of delivery for such deliveries at the time of delivery.

Retailers and other operators serving consumers through service stations, garages, curb pumps, or pumps located at bulk plants, shall conspicuously post, at the place from which delivery is made, prices at which gasoline, kerosene, and motor oils are sold.

No seller shall make any deviation from his posted prices (whether wholesale or retail) by means of rebates, allowances, bonuses, concessions, benefits, unusual credits, scrip books, or any plan, device or other scheme which may directly permit the buyer to obtain gasoline or kerosene at a lower net cost to him.

Commercial accounts, whether for delivery at service stations or otherwise, may be recognized as an exception to this rule in sections where they are now in vogue, but shall apply only to written contracts for charge accounts.

Rule 18 (formerly Resolution 10)—The practice of making deliveries of gasoline at refineries or wholesale plants into tank wagons or trucks operated by or for the purchaser thereof, is discouraged.

Rule 19 (formerly Resolution 11)—Coupon books or other scrip of any nature, if used, shall be sold and redeemed at their face value without any discount.

Rule 20 (formerly Resolution 13)—On a change in the posted price, no adjustments, allowances, credits or refunds shall be given to any buyer on deliveries already made.

Rule 21. Definitions—For the purpose of this code, the following definitions are adopted:

(a) Consumer. One who destroys the exchangeable value of a commodity by using it. He is an eligible buyer from service station, tank wagon, tank car, or in packages.

(b) Refiner. One who refines crude petroleum and natural gas into refined products.

(c) Jobber, Distributor or Wholesaler. One who carries a stock of petroleum products to sell to retail dealers or others for resale, but who may also sell direct to consumers.

(d) Retail Dealer. One who carries a stock of petroleum products to sell to the consumers only.

(e) Commercial Accounts. Petroleum products sold to persons, firms, or corporations using commercial vehicles in transportation or delivery of passengers, merchandise, freight or express, for use only in such vehicles properly licensed by public authorities for those purposes.

A.P.I. Comment

Commenting on the statement issued from Washington relative to revision by the Federal Trade Commission of the trade practice conference rules which it had heretofore approved for use by the petroleum and petroleum products industry, W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, national organization of the petroleum industry, said:

"The action by the Federal Trade Commission comes as a complete surprise. It had been assumed that the 21 trade practice rules embodied in the petroleum industry's national code of practices for marketing refined petroleum products, approved by the commission July 25, 1929, and which since have guided the operations of more than 16,000 of the units marketing petroleum products in accordance with an agreement with the commission to observe them, were entirely satisfactory to the commission.

"With no knowledge before me of why the commission has taken this action, I can only assume that it means a change in its policies with respect to the character of the rules it intends to have included in the trade practice conference agreements which it approves.

"All these rules which the commission has reconsidered and eliminated refer to competitive marketing practices which the industry, in an effort to reduce its marketing costs, sought to avoid. The rules were adopted originally with the full knowledge and approval of the commission.

"The commission's action is just another illustration of the difficulty met by every industry which, in the interest of the public and itself, wants and tries lawfully to put its house in order and to make its operations conform to the best practices or the law of economics.

"The action of the commission will be studied promptly and carefully by the appropriate committee of the Institute, and likely a national conference of marketers will be called shortly to determine our future policy and procedure."

Order Suspended 60 Days

WASHINGTON, D. C., Feb. 9.—The Federal Trade Commission today adopted the following order:

"The commission, having reconsidered and rescinded its 'approval' and 'acceptance' of certain rules of the petroleum industry, and the industry having requested 60 days' postponement of the commission's action, it is ordered that the industry be notified that it may have 60 days from date within which time to show cause in writing why the commission's action should be modified or rescinded, and in the meantime the action of the commission is suspended."

FEWER NEW WELLS AND LOWERING OF INITIAL OUTPUT IN JANUARY

Development work slowed up in January in the fields east of California and 111 fewer wells completed are recorded compared with the December record, and the total initial production fell off 73,093 bbls. Big wells in Oklahoma County, Oklahoma, and in Rusk, Gregg and Van Zandt Counties in East Central Texas were responsible for the high initial production totals in the two divisions referred to.

Owing to the huge potential overproduction, new work in the field dropped off and at the end of January there were 41 fewer new rigs up and 341 fewer wells drilling, a total decline of 382 in field operations. Following is the summary for the month:

SUMMARY OF ALL FIELDS

	Wells Completed			
	Comp.	Prod.	Dry	Gas
Eastern	167	455	39	57
Central Ohio	54	220	17	23
Lima	17	21	2	10
Indiana	18	147	11	4
Michigan	6	600	2	1
Kentucky	50	1,070	20	12
Illinois	6	25	2	0
Tennessee	1	....	..	1
Kansas	47	13,798	13	12
Oklahoma	198	540,133	76	23
North Central Texas	182	6,228	119	16
East Central Texas	23	76,325	2	1
East Texas	7	....	5	2
West Texas	49	2,010	33	0
Texas Panhandle	32	9,780	2	12
Gulf Coast	92	28,808	32	4
Southwest Texas	51	9,176	27	6
North Louisiana	31	9,190	9	0
Arkansas	9	105	5	2
Mississippi	13	....	6	7
Montana	5	31	0	3
Wyoming	7	2,276	1	2
Colorado	2	140	0	0
New Mexico	10	21,788	4	4
Utah	1	....	1	0
Total Jan.	1,078	722,326	428	202
Total Dec.	1,189	795,419	452	275
Difference	111	73,093	24	73

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	46	197	243
Central Ohio	29	123	152
Lima	8	17	25
Indiana	1	53	54
Michigan	50	95	145
Kentucky	6	147	153
Tennessee	0	17	17
Illinois	3	23	26
Missouri	0	3	3
Kansas	36	138	174
Oklahoma	83	396	479
North Central Texas	32	130	162
East Central Texas	12	40	52
East Texas	7	17	24
West Texas	23	141	164
Texas Panhandle	30	74	104
Gulf Coast	22	158	180
Southwest Texas	17	178	195
North Louisiana	30	71	101
Arkansas	13	38	51
Mississippi	7	24	31
Alabama	2	3	5
Montana	23	74	97
Wyoming	17	97	114
Colorado	14	75	89
New Mexico	10	53	63
Utah	1	20	21
Total Jan.	522	2,402	2,924
Total Dec.	563	2,743	3,306
Difference	41	341	382

DUDLEY A. TYNG DIES

Dudley A. Tyng, vice president of Cole Petroleum Co., of Laredo, Tex., died at his home in Laredo recently.

ADVENTURES OF DOCTOR JILLSON BEGAN EARLY

(Continued from Page 32)

5 miles wide, which forms part of the northern boundary of Onondaga County, was a favorite recreation spot for young Jillson and his fellows. A beautiful body of water when on its good behavior, it has a nasty habit of flying into sudden and furious anger. Bill and an older cousin, Harry Jillson, were caught in one of these storms on one occasion and but for a kindly providence that watches over boys who get into tight holes, the State of Kentucky today would have some other man at the head of its geological survey.

The two boys arrived at Frenchman's Island late one evening and set out in a small sailboat, equipped with a gasoline engine, for Brewerton, 6 miles distant, at the western tip of the lake. A high wind arose suddenly and snapped off the mast. Almost at the same time waves that had developed with incredible swiftness leaped into the little craft and put the engine out of commission. Helpless, the two were blown about in the darkening tempest, Bill desperately bailing out water with a bucket and Harry doing his best to rig up a rude sail. Complete darkness settled over the wind-tossed boat. It didn't need a crystal-gazer to recognize that two members of the Jillson family were probably about to be permanently removed from circulation. The boys lost all sense of direction, but so long as they managed to stay on top of the lake, and not at the bottom, the hurricane was sure to blow them somewhere.

After about an hour, in which their boat, plaything of the gale, whirled, bobbed and careened like a tipsy cork, the two terrified boys felt their craft scraping bottom. Wading to shore and dragging their boat after them, they discovered that they had been thrown up on a sandy beach near Brewerton, the point for which they had started in the first place. Aside from being thoroughly drenched neither had suffered damage, but their enthusiasm for boating waned.

First Professional Job

Doctor Jillson's first professional geological work was done in 1912, the year of his graduation with the degree of B.S. from the Syracuse University, in the Lake Temiskaming country of northern Ontario, Canada. It was a difficult gold sulphide job and the young geologist was sent there to make a rapid reconnaissance, take samples, etc., for a group of men who contemplated taking over one of the supposedly important undeveloped properties north of Timmins, which was then the end of the railroad. Young Jillson arrived at North Bay on December 26 and met the American consul there in accordance with previous arrangements. The two used a team of horses and a bobsleigh in the first stage of their trip to the property and then a sled drawn by huskies.

There was snow on the ground, but most of the important rock outcrops were exposed. The two men spent a day examining the property and in the evening went to a log cabin maintained by the owners. A heavy snow fell that night and it became extremely cold, with the result that the two had to stay in the shack, keep a fire going and wait for a change in the weather. A thaw came the third day and the snowbound pair went out with it. An assay of the samples taken, made on the geologist's return to Syracuse, revealed no trace of gold in any of the outcrops and he prepared a report condemning the property. Perhaps the group of men who had engaged him for the task decided he was too young to know what he was talking about. Anyway they bought the property notwithstanding the adverse report. They never have received a dime on their investment.

Good Old Pay Envelope!

The next year, without funds needed to pursue the professional work he had planned, the young university graduate tried his hand at various jobs in the more or less exhilarating pastime of providing himself with food and a place to sleep. He wrote advertising in Syracuse for a little while. Then he went to New York and was in turn advertising agent, assistant manager and manager of the Regent Theater, one of the larger motion picture houses of the time. Here he formed acquaintance with many managers and producers, including Samuel L. Rothaphel, now better known on the air as "Roxy," of "Roxy and His Gang." The artificial gaiety of the theater palled on him, and he resigned, but after several weeks which lacked the inspiring atmosphere that a pay envelope helps so much to create he went back to advertisement writing, this time for Pathe Freres, of Jersey City, N. J. He met screen celebrities of that day—Crane Wilbur, Pearl White, Edna Mayo and others—which was pleasant in its way, but did not becloud the increasingly apparent fact that he was not getting anywhere in particular.

This conviction was strong upon young Jillson one summer morning in 1914, when an inventory revealing that he had enough money to get to Seattle, Wash., he forthwith resigned his job and bought a railroad ticket for that city. For several months his sources of income were precarious. Then he was made an instructor in geology in the University of Washington and things began to look up. In 1915 he was awarded the M. S. degree in geology and engineering by the same institution and later that year he was employed by the United States Topographical Survey on Mount St. Helens quadrangle in Washington. Here in one of the most rugged districts of the Cascade Mountains, where the local relief ranges from 3,000 to 5,000 feet, the young man gained practical experience in topographical work which was to be of immense usefulness to him in directing for the State of Kentucky the largest co-operative topographical survey in the world. The year 1916 was occupied chiefly with the search for Permian vertebrates and work in petroleum geology in the Osage already mentioned.

Most Interesting Rock He Ever Saw

Doctor Jillson's first trip to Kentucky was made in 1917, when he entered that field as an independent consulting geologist. He was doing exploratory work in the beautiful valley of the Big Sandy River in eastern Kentucky when, glancing at a great boulder on the bank of the stream, he beheld standing on it a girl whose sheer loveliness drove all thoughts of outcroppings, seepages, etc., from his mind. He forthwith devoted his energies to winning this girl on the big rock, who turned out to be Miss Oriole Marie Gormley, accomplished daughter of Louis H. Gormley, of Prestonsburg, Ky., oil and gas operator in Kentucky and Texas and ranch owner in Arizona. The young geologist and Miss Gormley were married a few months later.

In 1918 Doctor Jillson was appointed assistant professor of geology in the University of Kentucky, in Lexington. On February 1, 1919, he was appointed state geologist by Gov. A. O. Stanley and he has held that office since then under four succeeding governors. In 1921 Syracuse University conferred upon him the degree of Sc. D., and in 1925 Berea College awarded him the same degree.

At the time Doctor Jillson assumed supervision of the Kentucky Geological Survey it practically had ceased to function. For more than half a year it had been without a geologist and it was administered as a bureau of co-equal value with forestry on a joint annual appropriation of $15,000. This in spite of the fact that Kentucky was experiencing an oil boom. The Big Sinking Field in Lee County; the Station Camp and Cow Creek Fields in Estill County; the Allen County Field, Warren County Field and other fields in the State were undergoing rapid development. The new state geologist immediately set about mapping the State's structural and areal geology. County maps designed for oil and gas men were issued as fast as state funds permitted.

Report on Oil and Gas Resources

Doctor Jillson produced an extensive report on "The Oil and Gas Resources of Kentucky," which has been of great assistance to the oil and gas industry. He obtained special legislation separating geology from forestry, and much larger appropriations, with broadened scope, for the geological survey. The present state appropriations are $140,000 annually. Under the appropriation during the present biennium the Kentucky Geological Survey and the United States Geological Survey have co-operatively in the Bluegrass commonwealth a total of $400,000 for the surveying of standard topographic atlas sheets.

The Kentucky Geological Survey under the supervision of Doctor Jillson has issued a total of 225 state, county and regional maps for Kentucky, aside from topographical sheets. Fifty areal geological maps, serving as guides in drilling for oil and gas, all at a uniform scale of 1 inch to the mile, form a part of this general program which has been completed. Besides these there are many special economic oil and gas and coal maps; geographic maps of counties where there are no large mineral resources, and state maps of various descriptions, including three separate new geological, topographical and relief maps of the commonwealth at the scale of about 8 miles to the inch. The service performed for the oil and gas operator by the Kentucky Geological Survey under its present management has been a subject of much very favorable comment.

Besides being state geologist and director of the Kentucky Geological Survey, Doctor Jillson is curator of the Kentucky State Museum and he formerly was chairman of the Kentucky State Park Commission. He is a lecturer in geology at the University of Kentucky. From his personal pen have come 25 or more books and upward of 150 separate pamphlets and geological reports and maps, giving rise to a bibliography in excess of 11,500 pages. With his wife, three daughters and one son, he resides in Frankfort, Ky.

Rod and gun are Doctor Jillson's recreation. Winter and summer he keeps a supply of live minnows—sometimes in his office— ready for the fishing excursions he occasionally finds possible along Elkhorn Creek or Herrington Lake. Carefully racked in his home are guns suitable for various kinds of game. Twenty years ago, as a member of Troop D, First Cavalry, New York National Guard, he won medals for "Marksmanship," "Sharpshooter" and "Expert." He is a member of the Delta Kappa Epsilon college fraternity, graduate fraternity Gamma Alpha, and numerous geological, geographic and engineering societies at home and abroad.

OIL EQUIPMENT AND ENGINEERING EXPOSITION

Exterior of buildings housing California Oil Equipment and Engineering Exposition.

The latest designs in equipment are always of interest to all engaged in the drilling, production, transportation and refining branches of the oil industry and the Oil Equipment and Engineering Exposition is making every effort to provide ideal conditions for the display of tools and machinery at the second annual exposition March 16 to 22, 1931, in Los Angeles.

The main building offering 72,000 square feet of exhibiting space has every modern facility to make the display most advantageous to the oil men who will inspect them. Many of the tools and machinery will be in operation while others will be demonstrated. A complete rig will be demonstrated in operation and the engineers will be on hand to explain the new developments in equipment. Other outside spaces will be used for plant installations and for heavy machinery of the larger type. Specialty tools will be the source of valuable instruction to all visitors.

The walls and flooring for the 80'x40' extension to the main building which will be used exclusively by the various societies as a meeting place, have been completed. A screen will be provided for permanent use of the societies and a projector will be furnished.

Considerable interest is being displayed in the showing of new inventions. These will be of devices not yet manufactured and will be displayed either as models or drawings with a complete description of construction and application.

The schedule for society meetings will be completed within a week or 10 days. These meetings will provide the visitors with valuable data on methods of operation in the many branches of the oil industry.

The exposition is located in the heart of the Los Angeles Basin oil fields and is within a short distance of all other California fields. Trips through the local fields are being arranged so that all visitors from outside the State will be given an opportunity to inspect the methods being employed in California. These trips will be free as will admission at all times to the exposition; but both the free trips and free admission will be confined to those who are connected with the oil industry in some capacity.

IMPORTANT OIL LINES WERE LAID IN 1930

(Continued from Page 29)

areas. The low knock rating gasoline which can be refined from the oil from these fields will give the oil a greater demand by majors, while independent refiners, which first promised to enter the district at several places, could not handle the oil through skimming process alone due to the low-grade fuel oil which comes as residue from the high paraffin content crude, consequently the major companies which have large modern refineries are in a better position to handle this oil.

Mr. Penn said there will be a demand for $1 per barrel oil from this district if the production is curtailed until summer, with the production from New Mexico and Oklahoma curtailed as it is now, but that at present there is too much oil just as there is too much cotton, and more should not be thrown upon the market to bring the price still lower. "The trouble with the oil industry," Mr. Penn said, "is that we have been thinking in terms of barrels instead of dollars, and that the royalty and land owners will not lose money in the production of these new fields unless they are produced recklessly, and the oil sold at 'bootleg' prices."

Mr. Penn pledged the help of the Central Proration Committee for East Texas if proration was adopted, and said it would solicit the aid of the major pipe line companies for the fields, giving everyone a fair deal if possible, but that the

producers and royalty and lease owners should not wait until too late before asking for proration in the fields.

Judge C. L. Brachfield, chairman of the East Texas committee of 25 said his committee had no word of condemnation against any man who had come to East Texas and spent his money to produce oil in the district. He said his committee wanted time in which to study the new situation and new commodity produced in its district, and desired to make a full investigation before taking definite steps in regard to curtailing drilling and production.

Carl Estes, Tyler publisher, is the adversary of what he terms "premature proration" of the East Texas fields, and the operators themselves, do not desire to incur the enmity of the people of this newly opened section, therefore they will have to proceed slowly with any plans to curtail development, at least until these people observe that the fields need some form of help. It already appears as if some of the drilling wells would not be given connections in the fields, and would have to be shut down because of lack of purchasers, and although there are at present four lines serving the Joiner Pool, the companies owning them will not desire to connect with all the wells to be completed in the pool, and even though they did want to make such connections probably could not dispose of the oil from all of the wells.

Although the oil from the Joiner Field tests 39.6 and better, and should bring around $1.05 per barrel, much of it has been sold under contracts for a little better than a third of this price, with possibilities of it being cut lower as many new producers are completed.

Joiner and Bateman Areas

Independent operators control the Joiner Pool at the present time, the Sinclair Oil & Gas Co. being the only major company owning potential producing acreage. Due to the land being cut up into many small tracts and owned by independents, with independents owning the four lines out of the pool, they will control production, purchases and proration in this pool as they see fit, at least until a major purchasing company extends a line into the pool, which looks quite distant at the present time.

The Bateman Field near Kilgore, in northern Rusk County, stands in a different position than the Joiner Field, since the Humble Oil & Refining Co. purchased the 1,440-acre block and the discovery well and is now laying its own line into the pool. Fourteen drilling rigs surrounding the block, owned by independent operators, will desire pipe line connections when and if completed as producers, and these operators may lend their voices to obtain proration in the area in order to obtain connections by the Humble line. The Houston Oil Co. is entering this pool with a gathering line, tank farm and loading rack and will load out oil to its refinery at Camden, Ark., but it has interests in several leases in the field, and may elect to take only its own and associates' oil.

Gregg County Situation

The Farrell-Lathrop Field, in Gregg County is in another situation with the Arkansas Fuel Oil Co. (subsidiary of the Cities Service Corp.) holding a half interest in the discovery well, and full interest in approximately 3,000 acres around the well, with Farrell and others owning the other half interest in the well, and full interest in about 2,500 acres around the well. Several companies are figuring on the latter owners for their acreage, and some other major company, possibly the Sinclair Oil & Gas Co. or Doherty interests may purchase this acreage, thereby giving a block of around 5,500 acres to major companies immediately surrounding the well. The Shell Petroleum Corp. and Amerada Petroleum Corp. have a few small leases near the well, and outside of the main block the acreage is practically all held by independent operators. The Arkansas Fuel Oil Co. has laid 3½ miles of 6-inch line from the discovery well to a 40-car loading rack on the T. & P. Railroad and will market the oil in Shreveport, La., with intentions of laying an 8-inch line direct from the field to that place, a distance of around 70 miles.

The three separate areas in the two counties offer different problems for proponents of proration, and it will be interesting to watch the formulation of plans, how it is to be conducted in the different pools, when and if adopted, and just what major purchasing companies will enter the fields with pipe lines.

Federal Court Decision

GUTHRIE, Okla., Feb. 9.—The Federal Court, by a vote of 2 to 1, upheld the constitutionality of the Oklahoma conservation law of 1915 in a decision handed down today in the case of the Champlin Refining Co., Marco Oil & Royalty Co., Century Petroleum Corporation Oils, Inc., and Capitol Producing & Refining Co., which sought a court order restraining the Oklahoma Corporation Commission from interfering with them in the production of their oil in Oklahoma.

Judge John H. Cotteral of the United States Circuit Court of Appeals and District Judge R. L. Williams, Muskogee, concurred in the opinion. District Judge Franklin H. Kennamer, Tulsa, dissented, saying that "the evidence clearly shows that the orders of the commission are intended to restrict the volume of oil that may go into the channels of interstate commerce from the oil fields of Oklahoma."

The Cotteral-Williams decision agreed "there is no interstate commerce in proration of oil production under the state law." Judge Cotteral said, in handing down the decision, "Oil and gas may be subjected to interstate commerce only when produced."

"One of the only contentions," said the opinion, "of worthy notice is that whether the proration is unconstitutional and invalid because it regulates and is a burden on interstate commerce.

"It appears that a large portion of the potential in the State would, if unlimited production were allowed, be shipped out of the State and go into the channels of interstate commerce. But the inference therewith is too remote.

"It is certainly a far-fetched view that proration affects commerce in a commodity to which the parties have not yet acquired title. The proration of oil may be likened in a measure to manufacturing goods or mining of coal, which is not commerce, although they are intended to be and are afterward shipped in interstate commerce.

"The settled doctrine that the buying and selling of goods for shipment beyond the State is interstate commerce does not apply to the proration of production under the state law."

Murray Majority Report

OKLAHOMA CITY, Okla., Feb. 8.—Five of the nine members of Governor Murray's advisory committee on oil legislation submitted a report to the governor which was made public today. The report is signed by C. A. Owens, chairman, Pat Malloy, H. H. Champlin, W. R. Ramsey and E. B. Howard. The report condemns the Oklahoma conservation law passed in 1915, and recommends that it be changed to conform with the Texas law, and it condemns the manner in which curtailment of oil production and proration of runs from wells has been carried on under the orders of the Oklahoma Corporation Commission. The report is a voluminous one.

Four members of the committee, Roy M. Johnson, oil producer; Wirt Franklin, producer and refiner; E. B. Reeser, president of the Barnsdall Oil Corp.; and W. R. Davis, vice president of the Phillips Petroleum Co., disagreed with the majority membership and are expected to present a minority report that will thoroughly cover the situation as they view it.

A summary of the majority report, together with the recommendations of the majority membership of the committee are as follows:

1. The petroleum industry of Oklahoma is as to its whole structure unstable, with little or no prospect under present conditions for relief. There is great conflict of opinion as to the remedy. The demand and necessity, however, for some relief is unanimous.

2. The present so-called "conservation law," enacted by the legislature of this State in 1915, is in no true sense a conservation measure. Every order of the corporation commission has been fashioned and enforced primarily as a means and a plan of fixing and maintaining a price for crude oil produced within the State.

3. The statute as invoked and the orders as issued in effect give legal sanction to trade agreements that otherwise would be in clear violation of the anti-trust laws.

4. Proration draws its most powerful support from the great major units and other allied and controlled concerns, including a foreign company. It has the support of independent interests also, but for the same primary purpose. Namely—to maintain a price. The independent interests have been induced to support the plan under the name of conservation, upon the assurance by the major interests that to do so would stabilize the industry and bring better and higher markets.

5. "Proration" and "conservation" must be distinguished. The one deals with price and market demand and is drawn for the benefit of special, private interests. The other deals with the prevention of waste and the dissipation of the natural resources and is set up for the public good.

6. The oil and gas resources of the State should and can be conserved under a true conservation measure.

7. The loss of Oklahoma's crude market has progressively increased as proration has become more legalized and rigid in its operation.

Calls It Price Fixing

8. No producing State in the union, or in any foreign country, has law comparable in its price fixing features with that of Oklahoma. During the proration period in Oklahoma, Kansas, Texas and California have increased their markets. Free imports of crude and refined products have likewise steadily increased so that the displacement of domestic crude equals about an average of nearly 400,000 bbls. a day.

9. There is a marked identity of interest and of advocacy for free imports and for proration of the Oklahoma oil fields on the basis of a market outlet as defined by major purchasers.

10. It is estimated that the experiment, with other economic factors not traceable to it, has cost the State $6.000,000 in gross production tax. $3,000.000 of which was sustained in the single year of 1930.

11. Great physical loss of an irreplaceable natural resource has been sustained.

12. Every order of the commission is based upon the nominations of pipe lines and purchasing companies for future 90-day periods. Government itself is therefore made the efficient agent of special, private interests.

13. Pending remedy of the situation by the legislation proposed, the taking of potentials should be subjected to disinterested survey of someone authorized by the governor.

14. The whole plan of proration is entrusted to agents paid and representing oil concerns, through associations, who are most interested in the orders to be made. This is unreservedly condemned.

Recommendations

1. The repeal of the present price fixing, so-called "conservation" act of 1915, and the enactment of a true conservation measure modeled on the law of Texas. The waste provision of the Texas statute reads:

"Article 6014. Waste—Neither natural gas nor crude petroleum shall be produced, transported, stored or used in such manner or under such conditions as to constitute waste; provided, however, this shall not be construed to mean economic waste; the term 'waste' in addition to its ordinary meaning, shall include permitting (a) escape into the open air of natural gas except as may be necessary in the drilling or operation of a well; (b) drowning with water of any stratum capable of producing oil or gas, or both oil and gas, in paying quantities; (c) underground waste; (d) allowing any natural gas well to wastefully burn; (e) the wasteful utilization of natural gas; (f) the creation of unnecessary fire hazards."

2. The provision for ratable or equitable producing has been stricken from the conservation provision of the law but left for the protection of the producer in a common purchaser act. The obligation is thus left where it ought to be—with the purchaser who makes markets and not with the producer who seeks them.

3. Should all price fixing be stricken from our regulation of the petroleum industry and our law made uniform with other producing states and foreign countries, particularly the State of Texas, the result would not be chaos, or a return to the "law of the jungle," or anything other than a uniformity of law in the hope of recapturing the markets that have been lost and restoring stability.

4. The administration of state petroleum policy should be drawn for the welfare of our 2,500,000 people rather than the some 1,000 oil producers of the State and some few large concerns that have gigantic interests outside the State.

Suggests Increase in Stocks

5. There is no certainty that the repeal of proration would result in the impairment of the general price structure in the State. It is suggested that if any great additional amount be sold from such flush fields as Oklahoma City at reduced prices, such oil very probably would go to storage with the added cost thereto that does not obtain in the settled pools. The cost of storage might very well be the equalizing factor that would tend to maintain the present price structure. In this connection it is pointed out there is an empty steel storage in the State of Oklahoma of about 25,000,000 bbls. This result actually obtained in the flush Cushing Field in 1915, the year of the enactment of the present law. Large quantities of Cushing oil during that period went into storage at very reduced prices without impairing the general price structure in settled fields. The posted market price for Oklahoma and Kansas crude steadily increased during the year 1915 from a price of 40 cents in February, 1915, to $1.20 per barrel, reached December 14 of the same year.

6. It is inadvisable at this time to recommend any legislation tending to exclude from doing business in the State foreign concerns.

7. If the recommendations made in the report to be in principle adopted it is believed the State will move back toward constitutional government in its relation to the petroleum industry. The laws of supply and demand will be restored and not stand repealed as they do today. The law and administration of our business made more uniform with the regulation in other producing states in force, such as Texas. The revenues of the State will be increased and made steady and values in anywise affected by the industry made more sound and rendered more stable.

Oklahoma Hearing

OKLAHOMA CITY, Okla., Feb. 6.—After hearing a mass of conflicting testimony in the matter of Wirt Franklin's petition for an increase in the production of the Oklahoma City Field to 10 per cent of its potential, the Oklahoma Corporation Commission closed the case and Chairman Walker announced that there would be no decision until after he and his fellow members had made a study of the evidence.

The taking of testimony covered several days and the commissioners permitted a free discussion for and against the petition.

An account of the hearings before the commission was given in the January 29 and February 5 numbers of The Oil and Gas Journal. A number of witnesses were heard since the close of the last report, including R. R. Penn of Dallas, Tex., J. S. Anderson of Oklahoma City, James A. Veasey and C. C. Herndon of Tulsa, H. G. Ellis of Bartlesville, Okla., and others.

Robert R. Penn Testifies

Robert R. Penn, a vice president of the American Petroleum Institute and chairman of the committee in charge of proration in the Texas fields, was placed on the stand on Wednesday. The presence of Mr. Penn at these hearings was

to answer the claims of the Sinclair Oil & Gas Co. that while the fields of Oklahoma had been curtailed Texas had stolen Oklahoma's market for crude oil.

Mr. Penn said that when proration in the Yates Field in Pecos County was suggested in 1927 he was opposed to it. It was after he had seen the plan working, both in Texas and Oklahoma, and had discussed the question with Mid-Continent oil men that he had been made a convert. About a year ago he became active in the conservation movement and was placed on the committee in charge of the work of holding Texas' immense potential production down to the demands made upon it by the market. Later he was made chairman of the committee, and then chairman of the central proration committee which acts as an advisor to the Texas Railroad Commission in matters affecting the proration movement.

The Yates Pool, Mr. Penn testified, is given a quota of 89,000 bbls. per day. Its potential is unknown because the wells there have never been permitted to produce long enough at one time to get a true gauge of their capacity. It might be somewhere between 4,000,000 and 5,000,000 bbls. in 24 hours if gauged after the manner in which Oklahoma City potentials are taken. He was of the opinion the field could average between 300,000 and 500,000 bbls. per day for a considerable period. Then followed the well-known story of the curtailment of other fields, like the Hendricks Pool in Winkler County, Chalk-Settles in Glasscock and Howard Counties, Darst Creek in Southwest Texas and the Hobbs Pool in New Mexico with its potential of over 1,000,000 bbls. in 24 hours and its 31,000 bbls. per day of allowable output, and the Van Pool in East Central Texas.

Cost the State Nothing

Mr. Penn said the force of men who saw to the enforcement of the State Railroad Commission's orders on proration was organized by the oil men themselves, just as in Oklahoma, and that the salaries and numerous other expenses incident to the carrying out of the plan were paid for out of money voluntarily contributed by the oil companies and firms. The charge against the industry was about a tenth of a cent per barrel. Every big producer in the State has consented to proration, and 98 per cent of the small ones, he said.

No orders had been issued affecting the East Texas fields, Mr. Penn said, and what he characterized as "mail order promoters" are opposing curtailment in that field. He said an agreement among producers was close at hand and that the Railroad Commission would soon issue an order affecting the East Texas area.

Texas' Actual Potential

Mr. Penn said that Texas could produce 2,000,000 bbls. per day, or nearly all the crude oil the country requires, for a considerable time. Since state-wide proration has been in effect, he said, production had been cut from 863,000 to 684,000 bbls. per day.

Ninety-five per cent of all the wells in Texas are of the "stripper" variety, the witness said, and he expressed the opinion that to have opened the Yates Pool to full production from the beginning would have put thousands of small wells out of business, as it would have brought the price structure down to a point where small wells could not have been operated. Keeping excess production in the ground has been for the protection of the small wells, which are good for many years of usefulness if kept on production.

Effect on Other Fields

James A. Veasey, vice president and chief counsel for the Carter Oil Co., and C. C. Herndon, vice president of the Skelly Oil Co., were important witnesses for the oil men who opposed any change in the production percentage in the Oklahoma City Field. Their testimony at times ran along parallel lines. They claimed a large majority of Oklahoma oil companies and oil men are in favor of proration and in favor of a continuance of the present program. Both strongly emphasized the importance to the general industrial picture of the 60,000 small wells in the State, which they believed would be put out of buisness if a flood of excess production is permitted. Mr. Herndon said that Oklahoma City was now being permitted to supply 20 per cent of the State's total production from its 695 wells. He believed this to be a fair allotment as against the scores of other fields with their more than 60,000 wells. The claim that some Oklahoma City operators had made that they had a market for the oil they asked to be allowed to produce was declared by both Veasey and Herndon to be nebulous.

Neither Mr. Veasey nor Mr. Herndon thought that much more oil could be disposed of at lower prices than the scale now in effect. They said that most oil companies were unfavorable to the policy of storing crude oil even at low prices, and indicated it was not possible to force a market for the oil. Both witnesses were of the opinion that Seminole was only disposing of as much oil as the market demanded. There were more crude oil outlets in the Greater Seminole Field than in the Oklahoma City Field. Seminole can produce more oil than its allotment, in their opinion.

Umpire Bradford testified that out of a total of 6,000,000 bbls. of rated potential production in the Oklahoma City Field those favoring an increase in the percentage of production, or not voting at all, represented 789,714 bbls.; as follows: Sinclair Oil & Gas Co., 408,109 bbls.; Oils, Inc., 122.453 bbls.; Century Petroleum Co., 110,868 bbls.; Prairie Oil & Gas Co., 48.444 bbls.; Capitol Oil & Gas Co., 38,568 bbls.; Don Leon Oil Co., 59 952 bbls.; Champlin Refining Co., 9.072 bbls.; and Marco Oil & Gas Co., 1,248 bbls.

J. S. Anderson of the firm of Anderson & Prichard, Oklahoma City producers, expressed himself as opposed to an increase in the production to 10 per cent of potential.

H. G. Ellis, general superintendent of the Wiser Oil Co. which owns about 1,500 oil wells in Oklahoma and Kansas, averaging a fraction of a barrel of oil per well per day, testified to the plight of the small operators and their opposition to the petition for an increase in the Oklahoma City allowable production.

Frank Argood, who claimed an interest in four producing wells and in others drilling in the Oklahoma City Field, appeared as a witness in favor of the Franklin petition, relating to the commissioners his need for selling more oil than his share allowed under the present plan.

J. D. Wrather, builder of refineries, testified that he was in the market for 1,000,000 bbls. of oil from Oklahoma City if he can purchase it at 70 cents per barrel and have it delivered at the rate of from 2,000 to 3,000 bbls. per day.

Texas Conservation Bill

AUSTIN, Tex., Feb. 9.—A public hearing has been called for February 11 by the house committee on oil, gas and mining to hear arguments for and against the Long-Graves general oil bill.

The bill is "an act to amend Article 6,008 of the revised civil statutes, 1925, and Article 6,014 revised civil statutes, 1925, passed by the regular session of the Forty-first Legislature so as to remove conflicts from the conservation statutes and more adequately provide for the conservation of oil and natural gas in the State of Texas."

Section 3 provides that Article 6,014 of the Revised Statutes of Texas of 1925 as amended by Chapter 313, General Laws of Texas, passed by the Forty-first Legislature in regular session, be and is hereby amended so as to hereafter read as follows:

Article 6,014. Neither natural gas nor crude oil shall be produced, transported, stored or used in the State of Texas in such manner or under such conditions as to constitute waste. The term "waste" as used in this act shall include, in addition to its ordinary meaning, (1) the escape into the open air in any quantity of dry gas as defined herein, except as hereinafter permitted; (2) the taking of or permitting the flow of a greater quantity of gas from any oil producing well than is allowable in conforming to the oil-gas ratio thereof as established as hereinafter provided; (3) the burning of natural gas for any other purpose than for heat, light or power, except as hereinafter provided; (4) "underground waste" which among other forms of such waste shall include, (a) permitting the escape of underground water from the sand in which it naturally occurs into any natural gas or crude oil bearing formation; (b) drilling, shooting, plugging and/or operating any crude oil or natural gas well in such manner as to cause infiltration or premature encroachment of water into any natural gas or crude oil bearing formation, or so as to cause the escape of crude oil or natural gas from the formation in which either naturally occurs into any other underground formation or through the surface fittings of a well, or in such manner as to tend to reduce the ultimate recovery of crude oil or natural gas from any formation capable of producing the same; (5) the wasteful utilization of natural gas; (6) permitting a natural gas well to wastefully burn; (7) creating unnecessary fire hazards; (8) the storage of crude oil in quantities exceeding the reasonable current market demand or reasonable demand for refinery purposes.

Gas From Oil Wells

Section 4. In addition to the foregoing, natural gas taken or permitted to flow from any oil well shall be deemed to be wasted, unless the gasoline content shall be extracted therefrom and the residue gas shall be used for heat, light or power purposes or returned to an oil or gas formation for the purpose of building up the pressure thereof; provided, however, that in fields where no gasoline plant is available for the extraction of the gasoline content from which such gas and/or the quantity of such gas produced is so small as not to justify the construction of a plant for the extraction of the gasoline from such gas as produced, and, in cases where the gasoline content of such gas is so small as not to justify the construction of a gasoline plant, upon a proper showing to the commission of such circumstances and a finding made as to either of the foregoing facts, the commission may, by its order, exempt the owners or operators of oil wells in any field from the requirements of this section; and, provided further that upon notice and hearing the commission may grant a permit in exception to the provisions of this section for the manufacture of carbon black from residue gas remaining after the extraction of gasoline from casinghead gas until such time as it appears there is a market for residue gas for use for heat, light or power purposes. Upon change of conditions, after the making of an order of exemption from the provisions of this section, such order may be revoked or set aside by the commission.

Uses of Natural Gas

Section 5. Natural gas may be used in the State of Texas for the following purposes only:

(a) In the ordinary manner of domestic or industrial use for heat, light or power purposes.

(b) Residue gas remaining after extraction of the gasoline content from casinghead gas may, by permissive order of the commission, be used in the manufacture of carbon black, provided there is no market for such gas for its use in domestic or industrial service for heat, light or power; and provided further that the permit of the commission, granting the privilege of using residue gas for the manufacture of carbon black may be revoked if it shall appear that, after notice and hearing, there is an available market for such residue gas for domestic or industrial uses. The utilization of natural gas for the manufacture of carbon black, except as herein authorized, is prohibited.

(c) Residue gas, after the extraction of the gasoline content thereof, or casinghead gas wherein the gasoline content is so low as not to justify the construction of a gasoline plant, and where there is no existing gasoline plant available, may, by permissive order of the commission, be injected into an oil or gas formation for the purpose of building up the pressure therein and increasing the production of oil or gas from a producing formation, provided there is no market for such gas for use in the ordinary manner of domestic or industrial use for heat, light or power purposes; and, provided further that where a permit is granted by the commission for repressuring an oil or gas sand or formation, such permit may be revoked after notice and hearing at which it is shown that there exists a market for such gas for domestic or industrial uses. Casinghead gas, dry gas or residue gas may also, by permissive order of the commission, be used for flowing an oil well under the same limitations and conditions as in the case of other uses provided for in this paragraph.

Shutting in Gas Wells

Section 6. Article 6,008 of the revised civil statutes of 1925 be and is hereby amended so as to hereafter read as follows:

When any well heretofore or hereafter drilled in the State of Texas for either oil or gas produces natural gas as defined herein, it shall be the duty of the owner or operator of such well and of his servants, agents or employes in charge of or working thereon immediately to shut in such well securely and to prevent the escape therefrom of the gas or any portion thereof until such time as such gas shall be utilized without waste. Provided, however, that the unavoidable escape of gas from such well for a reasonable time caused by the necessary pulling of the tubing or the necessary opening of such well for the purpose of cleaning out the same or making repairs thereon, done in accordance with the orders, rules and regulations of the commission, shall not be deemed a violation of this section. And provided further, that if in the drilling of any well gas is encountered in quantities of 1,000,000 or more cubic feet per day, and the owner or operator of such well desires to drill the same deeper, he or it must immediately equip same with the proper valves, control heads and connections in order that said well may be shut in and the escape of gas therefrom prevented at times when drilling is not actually going on, and it shall be the affirmative duty of such owner or operator to prevent the escape of gas from such wells at all times when drilling is not actually going on; and where it is practicable to do so the commission may require the use of adequate devices to prevent the escape of such gas while drilling is actually going on. Provided also that, if the owner or operator of such well desires he may drill through such gas producing sand in order to produce oil or gas from a lower sand or stratum, without, however, permitting any gas to escape from such well except when drilling is in actual progress; and, whenever and as often as drilling is discontinued for any period, however short, it shall be the duty of the owner or operator of such well to securely shut in such well and effectually prevent the escape of the gas therefrom; and, after drilling through said gas producing sand or stratum, it shall also be the duty of the owner or operator of said well to permanently case off bradenhead and protect the gas in said sand or stratum against waste as defined in this act.

Conservation of Residue Gas

Section 7. If a well producing oil also produces gas from the same sand or stratum in any quantity whatsoever, then no gas whatsoever in excess of that quantity per day allowed under the oil-gas ratio established for said field, pool, sand or well, as hereinafter provided for the purpose of expelling oil from the sand into the well, shall be taken or permitted to escape from said well. And it shall be the duty of the owner or operator of every such well to install a proper meter thereat with adequate automatic recording charts to correctly measure the quantity of gas flowing from said well, to keep said motor in proper repair and correct adjustment, and to measure by and through said meter and on said charts all gas which shall escape or be taken from said well, to preserve said charts for at least one year, and file with the commission on or before the twentieth day of each month a verified report in writing, identifying said well, and stating the quantities of gas taken or escaped from said well and the quantity of oil produced therefrom on each and every day of the preceding calendar month, and to exhibit to the commission or its authorized representative the original of said

charts whenever so directed by the commission.

Fixing Oil-Gas Ratio

Section 8. The maximum allowable oil-gas ratio in the production of oil and gas from any well in the State of Texas, until otherwise fixed by the commission, shall be 500 cubic feet of gas per day of 24 hours for each barrel of oil produced from such well during such period; and until an oil-gas ratio applicable to a particular field, pool, sand or well shall have been fixed by said commission, no owner or operator of any well producing oil in such field, pool or sand, shall take or permit to be taken or permit to escape from such well more than 500 cubic feet of gas for each barrel of oil produced by said well during each day of 24 hours.

Section 9. It shall be the duty of the commission, by appropriate order or orders, to establish a proper oil-gas ratio for each field, or pool, formation or well in each field producing oil in the State of Texas, specifying the quantity of gas, less or greater than 500 cubic feet, which may be taken or permitted to escape from any well in said field, pool or formation for each barrel of oil produced by said well, and in establishing said oil-gas ratio said commission shall so fix the same as to preserve to the greatest extent and for the longest time practicable the gas pressure in said field, pool or formation, retard as long as possible the encroachment of water upon the oil formation, extend the oil productive life of the same, and thereby increase as greatly as possible the ultimate recovery of oil from said field, pool or formation. In order to effect these purposes and to prevent waste in any form as defined in this act, the commission may require any well to be closed in completely and remain closed in until proper steps are taken to obey the orders of the commission seeking to prevent the "waste" of natural gas or crude oil or seeking to carry into effect the objects sought to be attained in this section.

Section 10. Gas returned to the oil producing sand in any oil field or pool for the purpose of building up the pressure in such sand may be taken from any well penetrating such sand only in quantities not exceeding that allowed by the prescribed oil-gas ratio; but gas pumped into a well, and not into the sand, for the purpose of flowing the well, under permissive order of the commission as in this act provided, where the same is recovered and recycled, shall not be governed by the oil-gas ratio.

Power to Enforce Law

Section 11. The commission shall have power and authority, and it shall be its duty to make and enforce all necessary and proper orders, rules and regulations for carrying into effect all terms and provisions of this act; and for the purpose of making such orders, rules and regulations and of enforcing same and the terms and provisions of this act, the commission shall have power to require of the owners and operators of oil and gas wells in this State any and all reports by it deemed necessary, to subpoena witnesses, administer oaths, and to hold hearings and carry into effect all proceedings necessary. Notice of hearings for such purposes shall be given at least 10 days in advance of such hearing and shall be given in such manner and form as the commission may prescribe.

DEATH OF DAVID S. SHELBY

David S. Shelby, 78, veteran scout of the Prairie Oil & Gas Co., died January 31 at his home in San Antonio, Tex., where he has been living for several years. The funeral was held Monday, February 2, and the burial was in San Antonio. Shelby was known far and wide in oil circles. Surviving him are the widow, two daughters, a son and a sister, Mrs. Preston C. West of Tulsa. His son, Edward Ellis Shelby, is a midshipman in the U. S. Naval Academy. One daughter, Miss Martha Shelby, lives in San Antonio and the other daughter, Mrs. Frederick Marx, lives in Cincinnati.

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Of Interest to Sales Departments

Motor Fuel Sales Gain 6 Per Cent, Tax Report Shows

An increase of 6 per cent over figures for a similar period in 1929 is shown in the report of the American Petroleum Institute on gasoline consumption during the first 11 months in 1930. In 44 states and the District of Columbia gasoline sales upon which state taxes were paid amounted to 10,205,970,000 gallons, compared with 9,625,805,000 gallons for a corresponding period in 1929.

The daily average consumption for November, 1930, was 36,439,000 gallons, compared with a daily average of 38,647,000 gallons in the preceding month.

GASOLINE CONSUMPTION BY STATES, NOVEMBER, 1930

	Nov., 1930 gallons	Nov., 1929 gallons
Alabama	13,037,000	14,136,000
Arizona	6,113,000	6,551,000
Arkansas	9,550,000	11,996,000
Colorado	12,793,000	10,646,000
Connecticut	17,642,000	17,003,000
Delaware	2,507,000	1,695,000
District of Columbia	6,761,000	6,036,000
Florida	18,625,000	18,593,000
Georgia	17,256,000	18,588,000
Idaho	4,835,000	4,987,000
Illinois	78,101,000	75,367,000
Indiana	42,493,000	33,869,000
Iowa	33,600,000	27,582,000
Kansas	27,700,000	24,312,000
Kentucky	13,665,000	12,819,000
Louisiana	16,299,000	14,649,000
Maine	8,765,000	8,032,000
Maryland	13,839,000	13,592,000
Massachusetts	42,787,000	41,398,000
Michigan	63,279,000	63,824,000
Minnesota	33,179,000	29,124,000
Mississippi	*10,430,000	11,223,000
Missouri	37,998,000	33,789,000
Montana	4,707,000	6,830,000
Nebraska	18,636,000	15,850,000
Nevada	1,430,000	1,464,000
New Hampshire	4,990,000	4,642,000
New Jersey	47,847,000	39,832,000
New Mexico	4,480,000	4,091,000
New York	120,377,000	114,807,000
North Carolina	22,272,000	22,834,000
North Dakota	7,559,000	5,787,000
Ohio	77,784,000	77,399,000
Oklahoma	32,643,000	25,804,000
Oregon	12,749,000	13,420,000
Rhode Island	7,994,000	6,405,000
South Carolina	10,068,000	10,490,000
South Dakota	10,124,000	8,682,000
Tennessee	16,478,000	16,659,000
Texas	64,785,000	64,364,000
Utah	4,447,000	4,652,000
Vermont	3,890,000	3,684,000
Virginia	18,340,000	17,672,000
Washington	20,450,000	20,711,000
West Virginia	11,766,000	10,674,000
Wisconsin	35,437,000	33,529,000
Wyoming	2,675,000	2,361,000
Total	1,093,182,000	1,032,404,000
Daily average	36,439,000	.....
Increase over previous year:		
Amt. of increase	60,778,000	.....
Percentage inc. in daily average	5.9%	.....

*Estimated.

ATLANTIC INCREASING STATIONS' FACILITIES

The Atlantic Refining Co. has more than doubled the number of its service stations in the past two years according to a report of the company. The company inaugurated an expansion program in 1928 at which time it had 260 stations.

In 1929, the number of stations had been increased to 307 and in 1930, 259 stations were added making a total of 556 at the close of the year. Since the close of 1930 additional stations have been added and at present there are 620 of which 310 are in Pennsylvania, 71 in New Jersey, 61 in Massachusetts, 14 in Rhode Island, 26 in Connecticut, 18 in Maryland, 14 in Virginia, 8 in North Carolina, 13 in Georgia, together with 20 authorized dealers in the state who honor the credit cards of the company, 20 in Florida and 52 in New York.

Twenty-eight stations are under construction at this time.

RETAIL SALES OF INDEPENDENT REFINERS GAIN IN CALIFORNIA

LOS ANGELES, Calif., Feb. 9.—Gasoline sales in California during 1930 were 6.64 per cent in excess of commercial sales during the preceding 12 months. This represents an increase of 83,212,152 gallons, the distribution in 1930 being 1,336,535,981 gallons and for 1929 a total of 1,253,323,829 gallons. Gasoline tax figures for 1930 indicate that the seven major companies sold 1,003,726,784 gallons in California, as compared with 332,809,197 gallons for the independent group. These seven major companies include Standard, Shell, Richfield, Union, Associated, General Petroleum and The Texas Company.

The unusually large spread between the retail price of gasoline as quoted by major companies and the prices posted by independents has had a pronounced effect on individual sales during the year. During the last quarter of 1930, for instance, the gallonage of independent refiners reached a new high figure of 102,590,732 gallons. The Richfield Oil Co. lost considerable gallonage during 1930, and, while the Shell Oil Co.'s sales in the fourth quarter of 1930 were considerably below distribution in the similar period in 1929, the loss was not unusually large. The Union Oil Co. maintained a consistent distribution throughout the year, the fourth quarter of 1930 being considerably higher than during the last period of 1929. The most significant feature in connection with gasoline sales in California for 1930 was the substantial consistent increase in the distribution by independent refiners. This increase is conclusive evidence that the wide differential existing between prices quoted for various brands of gasoline is the determining factor in sales. The sales of independent refiners will no doubt be watched closely because if any further serious inroads are made into the gallonage of major companies it may result in a readjustment of prices to meet competition on an equal basis.

The following table shows the sales of individual companies for 1930 and 1929:

GALLONAGE OF PRINCIPAL GASOLINE DISTRIBUTORS IN CALIFORNIA

	Gallons				
	1930				4th quarter
	1st quarter	2nd quarter	3rd quarter	4th quarter	1929
Standard Oil Co.	51,080,081	74,384,809	73,421,611	61,298,842	60,342,760
Shell Oil Co.	44,699,596	61,156,615	54,585,191	43,640,431	48,358,114
Richfield Oil Co.	35,580,205	39,283,492	40,919,214	32,899,440	39,544,799
Union Oil Co.	27,159,214	35,119,279	33,956,512	31,378,406	26,820,772
Associated Oil Co.	20,931,121	27,235,962	33,532,743	27,250,379	23,559,534
General Petroleum Corp.	19,736,252	27,790,331	30,683,291	24,802,069	16,951,456
Wilshire Oil Co.	13,756,330	12,093,811	22,022,356	23,062,345	18,842,905
The Texas Company	11,494,340	13,974,294	13,853,343	12,279,721	11,061,258
Western Oil & Refining Co.	7,852,844	6,082,552	5,468,709	5,573,192	9,081,534
Hancock Oil Co.	7,515,107	5,121,780	5,374,977	11,108,175	7,130,556
Rio Grande Oil Co.	5,830,217	5,018,605	4,674,526	9,110,332	5,615,816
Norwalk Co.	1,727,133	1,756,040	4,641,965	3,196,794	2,088,104
Sunset Pacific Oil Co.	10,946,696	7,980,060	4,476,810	2,689,037	13,326,994
Hercules Gasoline Co.	3,781,926	3,755,926	4,236,532	5,561,023	5,245,030
United States Refining Co.	4,279,350	3,757,474	4,089,328	6,670,985	3,300,603
Macmillan Petroleum Corp.	5,332,100	4,939,579	3,279,007	5,448,770	5,169,606
Seaside Oil Co.	3,558,301	2,906,253	2,831,646	3,198,636	4,151,592
St. Helens Petroleum Co., Ltd.	2,670,606	2,242,949	2,122,195	1,754,688	2,303,492
El Camino Oil Co.	3,475,095	3,126,906	1,535,518	1,991,653	1,649,743
Morrison, W. E.	611,255	863,246	1,165,543	1,422,765	.....
Wm. P. Andrews Oil Co.	370,174	397,756	1,159,919	1,747,472	.....
Lake View Oil & Refining Co.	1,344,113	1,470,862	1,120,733	1,177,104	1,294,586
Kettleman Hills Gasoline Co.	.....	378,929	1,072,767	1,492,929	.....
Edington-Witz Refining Co.	3,569,128	2,825,900	963,147	2,378,253	3,837,542
Petrol Corp.	3,744,040	1,687,424	933,462	3,510,318	4,473,215
Western States Pet. Corp.	951,980	526,707	911,185	427,174	1,113,015
Petroleum Specialties Co., Ltd.	249,352	743,196	834,428	1,033,242	.....
Vernon Oil Refining Co.	771,627	250,390	599,534	993,197	891,795
Gilmore Oil Co., Ltd.	852,358	42,352	456,597	1,100,939	369,155
Holly Oil Co.	997,554	1,749	1,833	1,627	1,048,146
American Refining Co.	.....	.....	.....	.....	2,703,375
Union Pacific Oil Co.	.....	373,599	904,303	2,183,043	.....
Mack, W. R.	.....	.....	.....	1,793,481	.....
Total	294,468,135	347,288,827	355,828,725	332,176,462	320,275,497
Others	993,123	446,619	1,370,532	3,963,558	3,341,392
Grand total	295,461,258	347,735,446	357,199,257	336,140,020	323,616,889

OIL CITY HEADQUARTERS FOR NEW JOBBERS FIRM

OIL CITY, Pa., Feb. 6.—Refiners Marketing Co., recently organized oil jobbers firm headed by Edward Bush, formerly assistant secretary of the Richfield Oil Corp. of New York, has established headquarters here and will be operated as an independent concern. The company has established another branch at Los Angeles, Calif., with William H. Henszey, of Los Angeles, as manager. Mr. Henszey was also formerly with the Richfield company.

SEEK LAW ON PRICES

Charging that an increasing number of cut rate service stations are displaying their signs without any indication of the quality of the gasoline sold, the Independent Service Station Dealers Association (California) has asked the California Legislature for a law requiring that the price of gasoline at all stations be displayed together with the name and specifications of the gasoline.

SINCLAIR SALESMEN MEET

A meeting to instruct agents of the Sinclair Refining Co. in the sale of special products of the company was held at the Mayo Hotel in Tulsa, February 9, and attended by more than 150 of the employes. Special articles manufactured by the company include: Inset spray, soap and wax oil for furniture and automobile polish. Dr. A. G. Grady, entomologist of the Sinclair, East Chicago, Ind., laboratory, demonstrated with the spray. D. M. Hills, assistant manager of the specialties division, had charge of the meeting.

CREW LEVICK ABSORBS PENN

NEW YORK, Feb. 6.—Penn Oil Co. of Erie, Pa., has been made a part of the Pittsburgh division of the Crew Levick Co., and is now operated under the name of Crew Levick Co.

For the past two years the Penn Oil Co. has been under Crew Levick management but had retained its former identity. M. A. Bonnell will continue as manager of the Erie branch.

MOTOR BUS OPERATORS PAY FOR HIGHWAY USE

Charges that the operators of motor bus lines enjoy a special advantage by being permitted the use of highways without cost are denied by Guy A. Huguelet, general manager of the Consolidated Coach Corp., Lexington, Ky.

Because the lines over which Consolidated buses operate extend into four states, Kentucky, Tennessee, Georgia and Alabama, it is believed that tax statistics covering its operations are thoroughly representative of general conditions throughout the United States.

Total taxes paid by the company to the four states in which it operated during the first 11 months of 1930 amounted to $232,676, Mr. Huguelet reported. His statement revealed that the company paid 15 different kinds of taxes, itemized as follows:

State franchise tax	$3,696.66
County franchise tax	7,353.61
City franchise tax	1,161.16
County tangible tax	3,508.34
City tangible tax	5,988.84
State tag tax	71,965.95
State privilege tax	30,555.33
State gasoline tax	84,428.84
Gasoline inspection tax	2,444.64
Control and inspection tax	1,046.25
County, city and state tax on buses	988.35
State road tax	384.24
Gross receipt tax	12,327.37
Property tax	6,549.51
Miscellaneous tax	277.53
Total	$232,676.62

For the same period the company's total revenue amounted to $2,585,947, which would indicate that taxes absorbed 8.99 per cent of the revenue. In the state of Tennessee revenue from the company's operation totaled $607,041, while the tax amounted to $58,633, or 9.66 per cent.

The total mileage of the company's vehicles during the 11 months was 10,159,651. On this basis the company paid a toll of almost 2½ cents for every mile that its vehicles traveled.

HEADS MINNESOTA ASSOCIATION

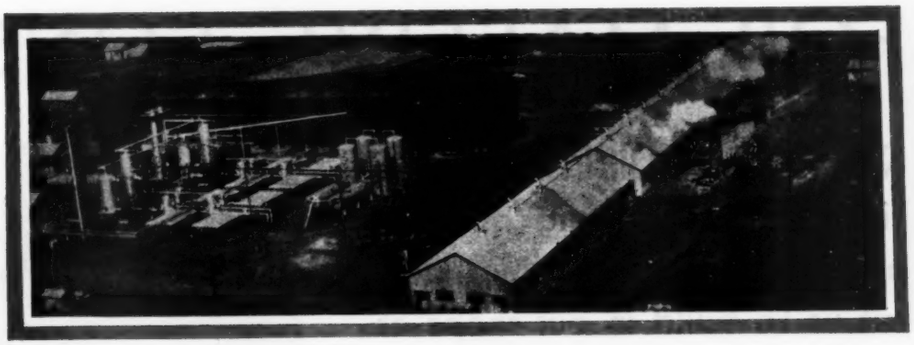
J. H. Burmeister, Faribault Oil Co., Faribault, Minn., was recently elected

J. H. Burmeister

president of the Northwest Petroleum Association.

Why REFINERS and DISTRIBUTORS are switching to an entirely new type of Finish . . . .

DULUX, newest chemical development by du Pont, in three-year tests indicates 50% to 100% longer life of color, gloss, and protective film.



The prodigal sun—its ultra-violet rays that feed on ordinary paints—its waves of heat that evaporate gasoline — are wasted on all Dulux-covered equipment exposed to the elements.

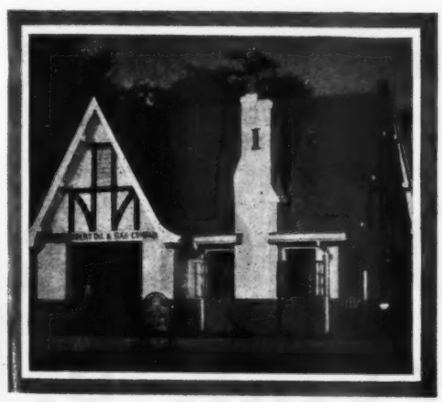
THREE YEARS AGO, a nameless and distinctly new chemical composition came out of the du Pont laboratories. It was sent to refiners and oil fields and paint farms all over the country. Last summer, finally perfected, it was presented to the oil industry under the name of Dulux.

Slashes Upkeep Costs

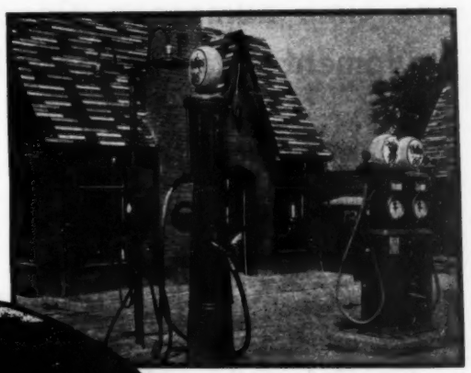
In its three years of rigid tests, this wholly revolutionary type of finish has swept aside all previous standards for the protection and decoration of surfaces. Now, refiners and wholesale and retail distributors are turning from the orthodox oil and varnish type of finish. For Dulux has cut their maintenance costs.

Tests Prove Worth

Dulux, tests indicated, will last from 50% to 100% longer than previously used protective coatings and will retain its color and its gloss from 50% to 100% longer.



A white that stays white regardless of climate is ideal for service stations such as this.



The Phillips Petroleum Company was one of the first in the oil industry to adopt Dulux for all equipment, from refineries right down to filling stations.

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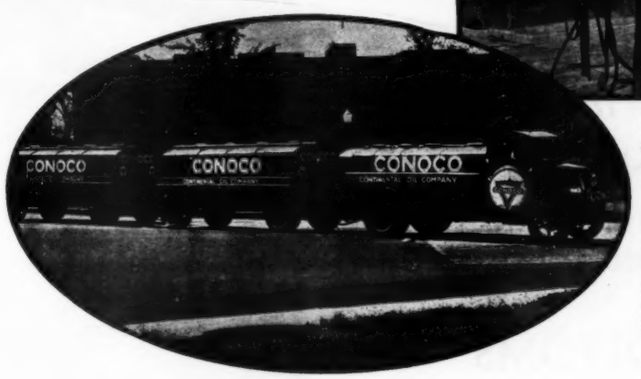

Linking low distribution costs to lower maintenance costs. The Continental Oil Company profits also by the improved appearance of this prize truck and trailer train in red and white Dulux.

Reasons for Long Life

Dulux resists the deteriorating effects of paint's most dangerous enemy, the ultra-violet ray of sunlight. It protects against moisture and resists the action of petroleum solvents. Though Dulux is hard, and difficult to scratch, it is so elastic that it will not blister or crack when metals respond to heat or cold.

Send for Free Bulletin

Add to those qualities the fact that Dulux dries quickly . . . brings property and equipment back into service with minimum time out . . . and you have a brief outline of the oil industry's reasons for adopting an entirely new type of finish. A technical bulletin explaining Dulux completely, we shall be glad to send without cost to you. Write E. I. du Pont de Nemours & Co., Inc., Dept. K2, 1616 Walnut Street, Philadelphia, or 351 California Street, San Francisco.

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WE ARE EQUIPPED for massive construction and quantity production. Our facilities permit us to build in our shops at one time numerous pieces of equipment of large proportions.

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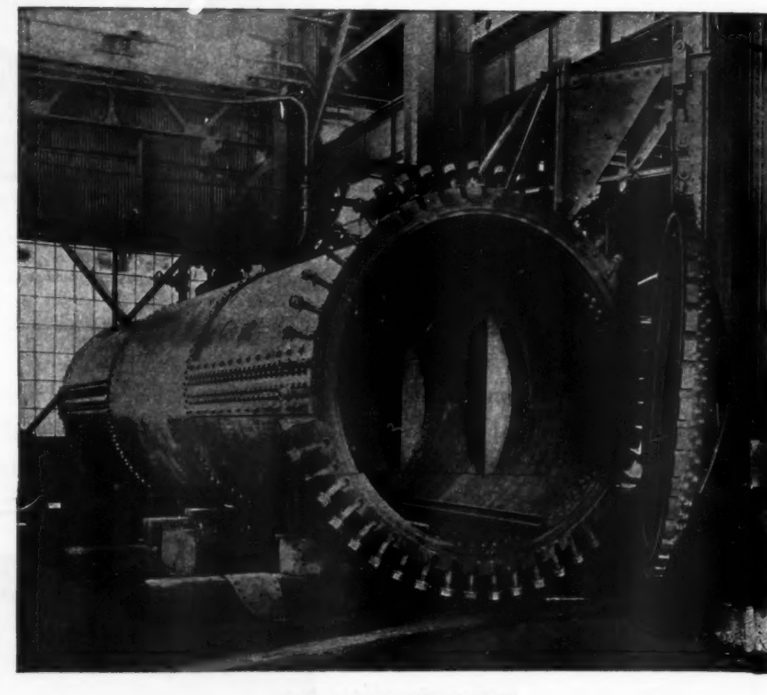
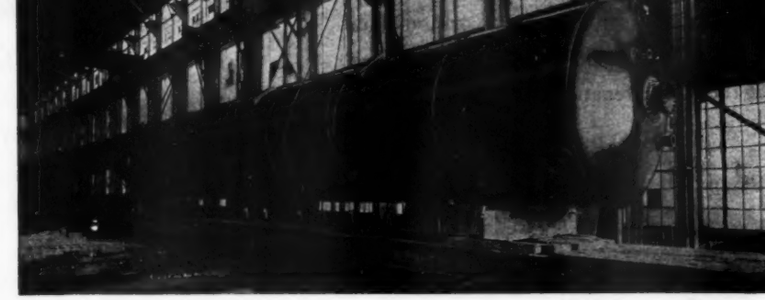


IMPREGNATOR SHELL



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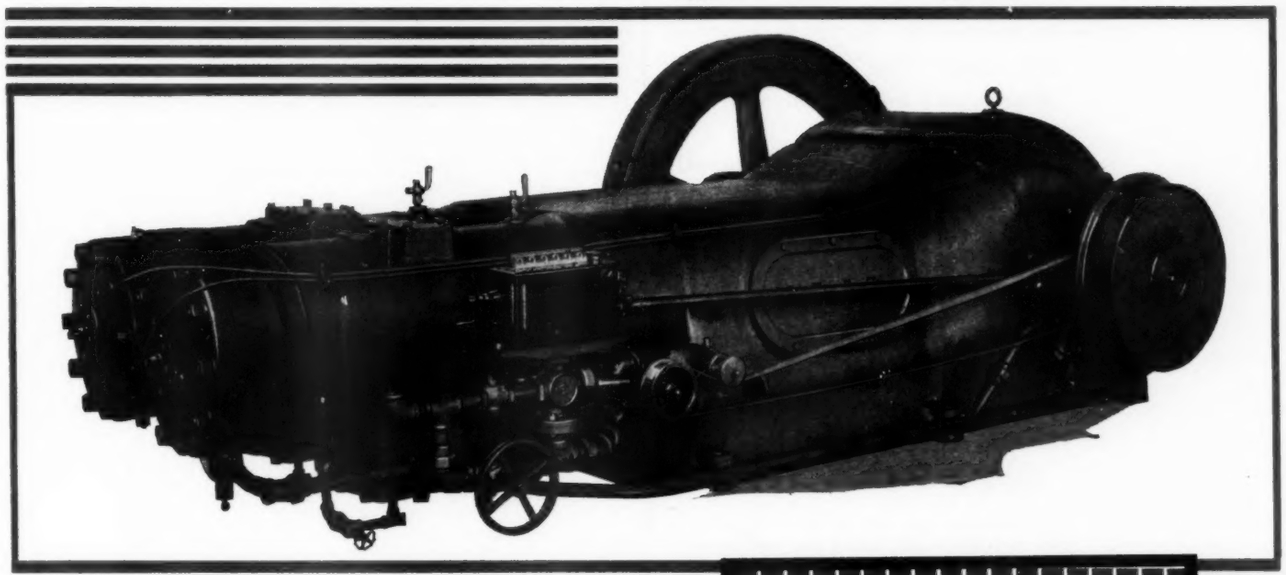

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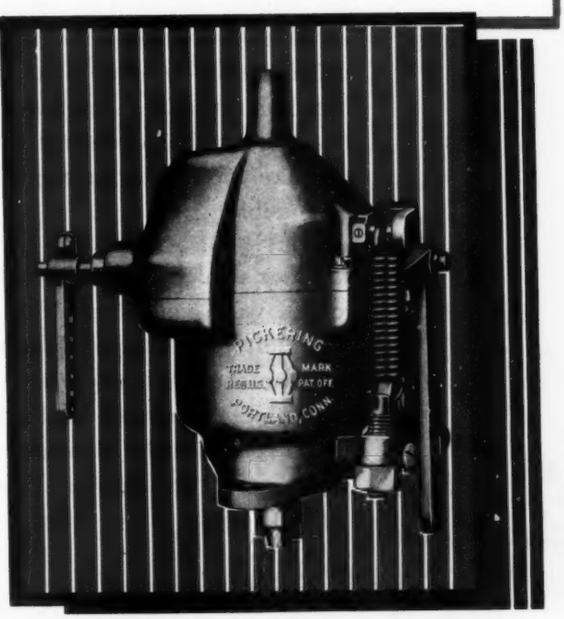

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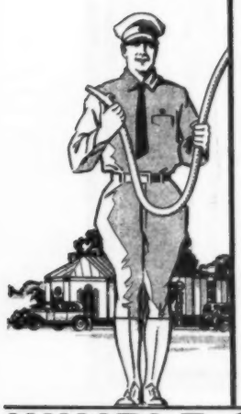

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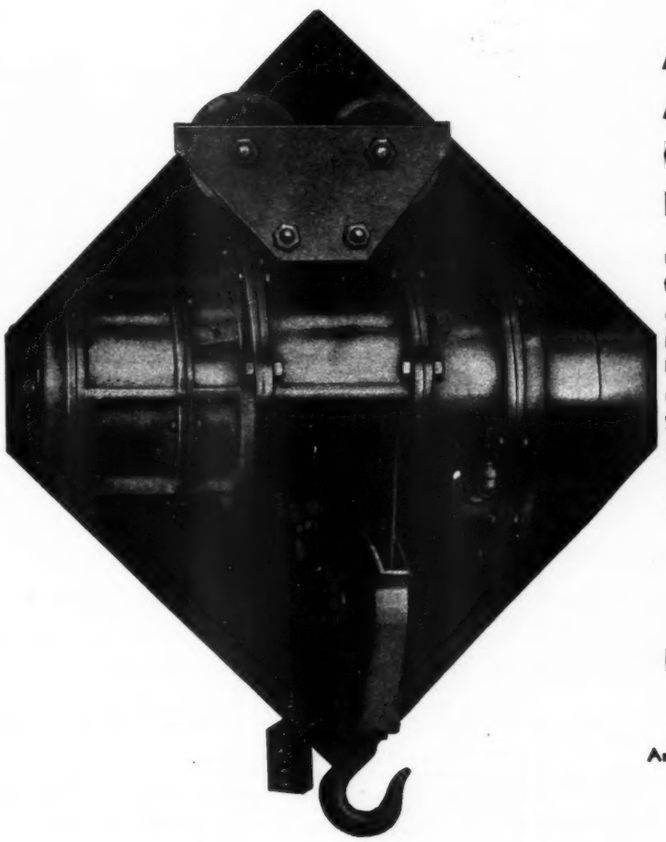

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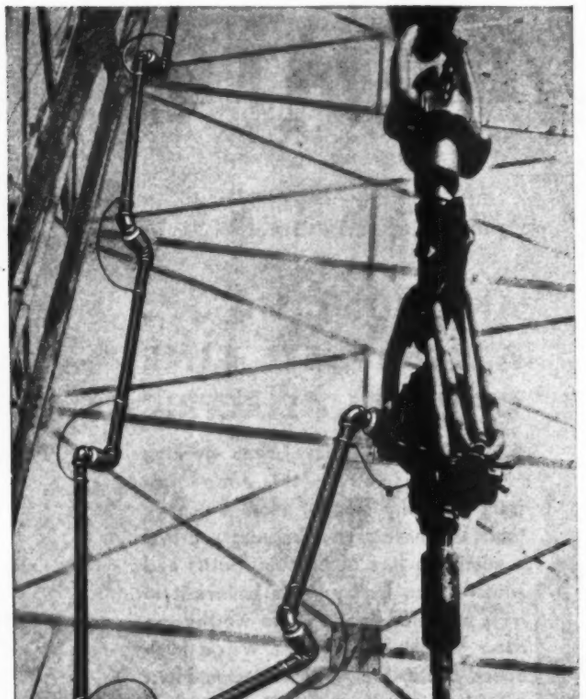

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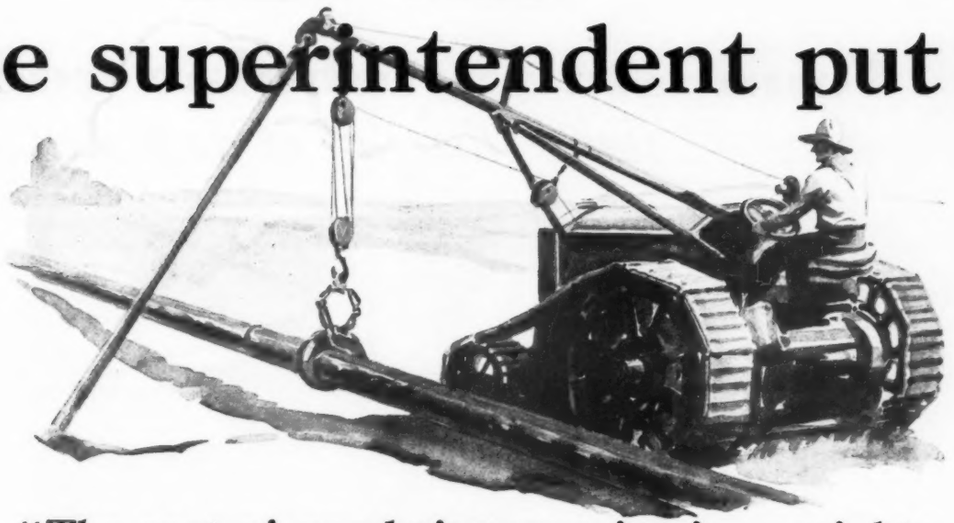
As one pipe line superintendent put it:



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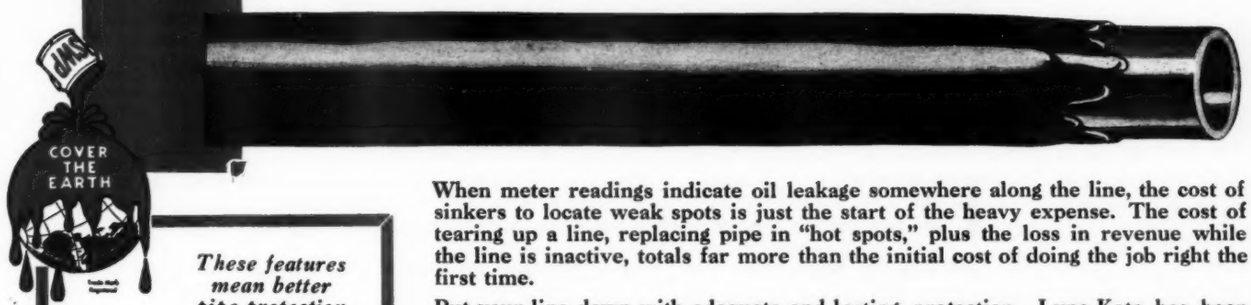

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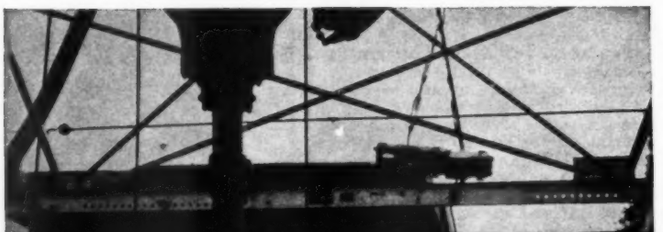

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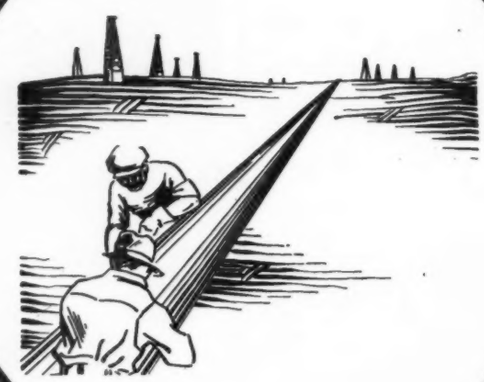

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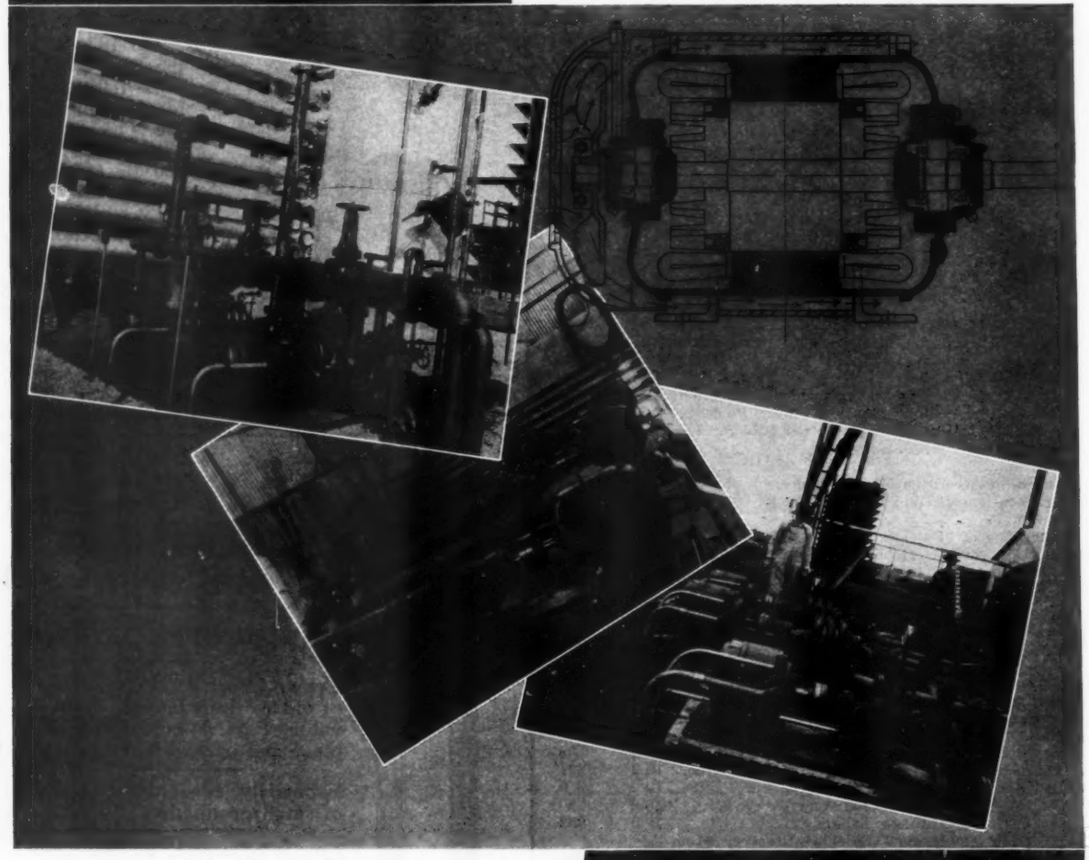

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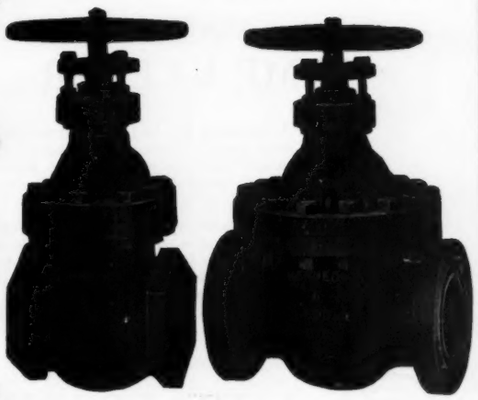

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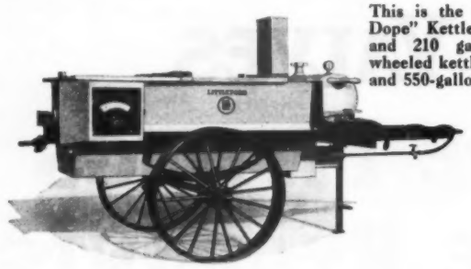

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Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w ... 20,000,000 ft. gas 5,350-5,400 ft.; total depth 8,589 ft.; shut down sprayed 50 bbls. gasoline.

HASKELL COUNTY

Ault et al's No. 1 Harrison, CWL SE NE Sec. 14-9-19 ... Shut down 650 ft.
Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 ... Shut down 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-9-19 ... Shut down 50 ft.
I. T. I. O.'s No. 1 Blake, SW NW Sec. 3-10-21 ... Shut down 3,007 ft.
Mid-Western's No. 1 Poister, C NE SE Sec. 33-10-22 ... Shut down 4,297 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 ... Shut down 1,645 ft.

KAY COUNTY

Wilwright Gas Co.'s No. 1 Wildegrube, NE SW Sec. 14-27-1 ... Layton 2,878-3,020 ft.; water; shut down.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 ... Location.
Peters & Buckles' No. 1 Hayes, NW NE NW Sec. 24-28-3 ... Drlg. 2,015 ft.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 ... Drlg. 2,700 ft.
Blackwell Oil & Gas Co.'s No. 1 Harshman, Sec. 2-26-1w. Rig on ground.
Boucher Oil Co.'s No. 1 Jefferson, NE SW Sec. 32-26-1w. Drlg. 1,535 ft.

KINGFISHER COUNTY

Prairie and Slick's No. 1 Wright, C NW SW Sec. 23-15-5w ... T. D. 6,890 ft.; plugged back to 5,100 ft.; shot 80 qts. at 5,045-56 ft.; no show; abnd.
Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w ... Cored 7,921-31 ft.; abnd.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w ... Rig.

LATIMER COUNTY

Choctaw Gas' No. 1 Weaver, C NE NW Sec. 4-6-18 ... Rig.
Howard et al's No. 1 Holmes Inv. Co., SE SW NW Sec. 16-3-21 ... Drlg. 408 ft.
Mid-Western's No. 1 Unknown, C SE NW Sec. 15-6-21 .. T. D. 1,724 ft.
P. English's No. 1 Unknown, NW SE Sec. 16-6-19 ... Shut down 300 ft.
Leflore Oil Co.'s No. 1 McBee, NW cor. Sec. 3-7-21 .. Shut down 3,601 ft.

LINCOLN COUNTY

Mote-Wheeler's No. 1 Stafford, NW NE Sec. 32-17-4 ... Drlg. 2,999 ft.

LOGAN COUNTY

Eason Oil Co.'s No. 1 Young, C SW NE SW Sec. 34-17-4w. Sand 4,919-42 ft.; made 870 bbls 21 hrs. and 485 bbls. the second 24 hrs.

McINTOSH COUNTY

Patterson et al's No. 1 Smith, SW cor. NW SE Sec. 32-9-16 ... Fishing 5,682 ft.

MUSKOGEE COUNTY

Rebold's No. 1 Miller, SE NE NE Sec. 32-13-19 ... Rig.
Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ... Shut down 1,011 ft.

NOBLE COUNTY

Barnsdall's No. 1 Miksch, NW SW Sec. 12-21-1 ... Wilcox 4,923-26 ft.; water; shut down.

OKFUSKEE COUNTY

Henry Oil Co.'s No. 1 Harjo, Sec. 36-12-9 ... Shut down 4,127-57 ft.; water; plugged back to 3,161-85 ft., showing 10 bbls.
E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 ... Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10 .. Shut down 3,690 ft.

OKLAHOMA COUNTY

L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ... Shut down 5,515 ft.
J. F. Cuniff, trustee's No. 1 Church Land, NE SW SE Sec. 17-12-4w ... Shut down 6,700 ft.

OSAGE COUNTY

Millard & Stanley's No. 1, SE SW Sec. 4-28-7 ... Drlg. 2,440 ft.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ... Shut down 1,950 ft.
Sperry et al's No. 1 Mullrap, SE SW Sec. 2-22-5 ... Shut down 1,740 ft.
Cochran et al's No. 1 Green, NE cor. SW, Sec. 15-23-5 .. Rig.

PITTSBURG COUNTY

J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17 ... Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14 ... Rig.
C. Canady's No. 1 Jones, NW cor. Sec. 14-8-14 ... Rig.

POTTAWATOMIE COUNTY

J. E. Crosbie et al's No. 1 Brown, NE NW SW Sec. 2-9-4 ... Drlg. 1,440 ft.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w ... Rigging up standard tools 3,348 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ... Shut down 2,905 ft.

SEMINOLE COUNTY

Sunray Oil Co.'s No. 1 Sunday, NW SE Sec. 35-5-5 ... Location.

STEPHENS COUNTY

Junior Oil Co.'s No. 1 Thompson, CNL SE SE Sec 1-1-7w ... Drlg. 2,600 ft.
Ross Southard's No. 1 McKinney, NE cor. Sec. 25-1-8w .. Shut down 1,063 ft.
G. Pace et al's No. 1 Pruitt, SW cor. SE Sec. 8-1-9w .... T. D. 2,042 ft.

WASHITA COUNTY

Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w. Drlg. 908 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ... Shut down 100 ft.
Petroleum Holdings, Inc.'s No. 1 Musie, NW cor. Sec. 10-9-20w ... Shut down 280 ft.

WOODWARD COUNTY

Prairie Oil & Gas Co. et al's No. 1 Wilbur, NE cor. NW Sec. 22-23-17w ... Shut down 7,445 ft.

OKLAHOMA PANHANDLE
TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1S ... Shut down 4,425 ft.
Palo Alto Oil Co.'s No. 1 Graves, NE SW SW Sec. 23-2-18e ... Spudded; shut down.

SOUTHERN OKLAHOMA
ATOKA COUNTY

Bryant et al's No. 1 Southern Trust, C SW SW Sec 3-1s-14 ... T. D. 900 ft.; abnd.
Stewart-Howland's No. 1 Howard, NW SE NW Sec. 6-4s-11 ... Shut down 100 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 18-3s-10 ... Shut down 400 ft.

BRYAN COUNTY

Bryan County Oil's No. 1 Childs, NW SE SW Sec. 7-7-10 T. D. 650 ft.
Bush et al's No. 1 Commerce Trust, NE cor. Sec. 35-6s-9 ... Shut down 690 ft.
Johnson et al's No. 1 Ussery, SE SW SE Sec. 14-16s-7e.. Shut down 485 ft.

CARTER COUNTY

Campen-Lasater Co.'s No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ... Shut down 2,656 ft.

COTTON COUNTY

Gilbert-Lowery's No. 1 Harneg, C SE SE Sec. 4-2S-11w.. Drlg. 1,250 ft.

LOVE COUNTY

G. Pace et al's No. 1 Burkhart, NE NW Sec. 13-8s-1 .... Drlg. 2,288 ft.
Batson & Sterrette's No. 1 Dillard, SE NE NW Sec. 25-6s-3 ... Show 5 bbls. 1,585-96 ft.
Hobbs et al's No. 1 Roberts, NE cor. SW Sec. 20-6s-3w .. Shut down 3,130 ft.

MARSHALL COUNTY

D. H. Curry's No. 1 Ward, NE SE SW Sec. 15-5s-6 .... Drlg. 1,320 ft.
McCrory et al's No. 1 Adams, NE SW SE Sec. 31-7s-6 .. Show 10 bbls. 532-40 ft.

McCURTAIN COUNTY

Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 ... Shut down 2,287 ft.

STEPHENS COUNTY

Morrison's No. 2 Hightower, NE NW SW NE Sec. 15-3s-5w ... Drlg. 265 ft.
Andrea et al's No. 1 Patrick, C E half SE Sec. 3-3s-8w .. Shut down 1,369 ft.
Obermyer et al's No. 1 Skelton, NE SW SW Sec. 32-15-7w ... Shut down 1,375 ft.

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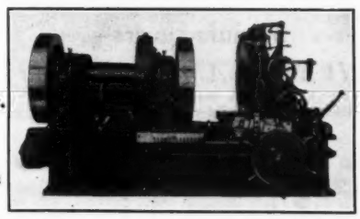

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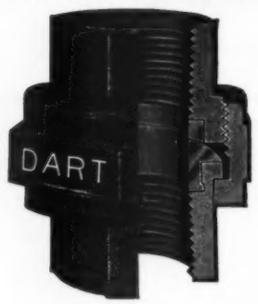

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TEXT OF CAPPER BILL FOR EMBARGO ON OIL

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Feb. 9.—The bill introduced by Senator Capper of Kansas in the Senate and by Representative Garber of Oklahoma in the House placing an embargo on importation of oil follows in full text:

Section 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the importation into the United States of America of crude petroleum, including fuel oil, from and after the passage of this act shall be limited as follows:

During the calendar year 1931 and for each of the calendar years 1932 and 1933 the total importations of crude petroleum shall be limited to, and not exceed, 16,000,000 bbls. for each of said calendar years.

Sec. 2. The total importations of crude petroleum from any one country for each of said three calendar years shall be limited to such proportion of the total of 16,000,000 bbls. as the amount of crude petroleum imported into the United States of America from said country during the calendar year 1928 bore to the total importations of crude petroleum for said year 1928.

Sec. 3. The importation of all refined products of petroleum, including all by-products and fuel oil, except as hereinafter provided, is hereby prohibited for said three calendar years, ending December 31, 1933; and all crude petroleum which shall have added to it or blended with it any refined product of petroleum of any kind shall likewise be forbidden entry into the United States for said period ending December 31, 1933.

Sec. 4. Crude petroleum admitted hereunder shall be crude petroleum in its natural composition as produced from wells.

Sec. 5. This act shall not apply to petroleum or to any of the products of petroleum which are imported solely for scientific or experimental purposes, but such imports shall not exceed 3 bbls. for any one shipment, and such imports shall be admitted only under special permits issued under regulations to be made by the Secretary of Commerce.

Sec. 6. The Secretary of Commerce is authorized to make such rules and regulations as may be necessary to carry out the provisions of this act, and it shall be his duty to enforce the provisions of this act, and upon his request the Secretary of the Treasury shall employ the facilities and personnel in his department to aid in the enforcement thereof.

Sec. 7. Any violation of this act shall be prosecuted in the district court of the United States of the district wherein the offense was committed.

Sec. 8. If any person fraudulently or knowingly imports or brings into the United States, or assists in so doing, any petroleum or any of the products thereof, contrary to this act, or receives, conceals, buys, sells or in any manner facilitates the transportation, concealment or sale thereof after importation, knowing the same to have been imported or brought into the United States contrary to law, said crude petroleum or any refined or by-products thereof shall be forfeited to the United States of America and the offender shall be fined in any sum not exceeding $5,000 or be imprisoned for any time not exceeding two years, or both such fine and imprisonment.

R. R. NUNN DIES

HOUSTON, Tex., Feb. 9.—Robert R. Nunn, field agent for the United Production Co., Houston, Tex., died from an attack of acute indigestion while on a business trip to Laredo, Tex.

DEATH OF WAYNE MUNN

Wayne Munn, well-known oil man, formerly a star of the Nebraska University football team and a nationally known wrestler, died recently in San Antonio, Tex.

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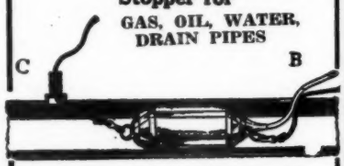

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Report for Month of December

Runs

	Month (bbls.)	Dly. av. (bbls.)
Prairie P. L. Co.	1,271,000	41,000
Gulf P. L. Co.	1,222,002	39,419
Texas P. L. Co.	679,782	21,929
Magnolia P. L. Co.	1,626,201	52,458
Empire P. L. Co.	1,900,653	61,311
Cosden P. L. Co.	741,249	23,911
Sinclair P. L. Co.	3,007,000	97,000
Oklahoma P. L. Co.	2,250,752	72,605
Other lines	5,549,000	179,000
Total December	18,247,639	588,633
Total November	18,336,190	611,206
Difference	88,551	22,573

Shipments

Prairie P. L. Co.	1,994,387	64,335
Gulf P. L. Co.	276,301	8,913
Texas P. L. Co.	1,037,037	33,453
Magnolia P. L. Co.	1,692,340	54,592
Empire P. L. Co.	1,768,811	57,058
Cosden P. L. Co.	508,332	16,398
Stanolind P. L. Co.	2,957,681	95,409
Oklahoma P. L. Co.	2,364,071	76,261
Other lines	5,301,000	171,000
Total December	17,899,960	577,419
Total November	22,032,627	710,729
Difference	413,667	133,310

Stocks

Prairie O. & G. Co.*	38,358,000
Gulf P. L.-Gypsy Oil Co.	8,401,860
The Texas Company	3,489,849
Magnolia Petroleum Co.	5,700,152
Empire P. L. Co.	5,300,761
Mid-Continent Pet. Corp.	4,286,897
Sinclair Crude Oil Pur. Co.*	18,500,000
Oklahoma P. L. Co.	2,758,031
Carter Oil Co.	10,069,192
Other lines*	22,889,000
Total December	119,753,742
Total November	120,275,702
Difference	521,960

*Estimated. Prairie and Stanolind shipments include Texas oil.

EASTERN PIPE LINE REPORT FOR DECEMBER
Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for November and December:

	Nov.,'30	Dec.,'30
Nat. Transit	104,496.10	110,146.31
S.W. Pa. P. L.	71,488.99	72,041.62
Eureka P. L.	272,972.79	289,000.11
Buckeye P. L. (Macksburg)	293,767.83	325,469.03
Buckeye P. L. (Cleveland)	9,244.34	11,757.62
Buckeye P. L. (Lima, etc.)	72,798.02	82,364.67
Indiana P. L.	3,171.88	3,342.37
Cumberland P. L.	157,587.04	178,692.00
N. Y. Transit	28,186.00	28,548.26
Tide Water P. L.	22,612.53	27,349.30
Pure Oil	190,625.17	204,537.02
Stoll Oil Ref.	27,202.39	14,378.02
Bradford Tran.	315,826.43	319,175.02
East Gulf Oil	.....	7,166.40
Total	1,569,979.51	1,673,984.81
Daily average	52,332.65	53,999.19

Note—Indian Refining Co. had other receipts of 265,208.78 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for November and December:

	Nov., '30	Dec., '30
Nat. Transit	402,823.28	418,614.12
S.W. Pa. P. L.	243,629.09	243,352.43
Eureka P. L.	192,900.15	268,939.44
Buckeye P. L. (Macksburg)	246,434.15	247,581.49
Buckeye P. L. (Cleveland)	1,949.80	1,464.51
Buckeye P. L. (Lima, etc.)	1,138,273.04	1,063,204.74
Indiana P. L.	360,294.63	287,189.39
Cumberland P. L.	96,581.63	129,255.52
Southern P. L.	34,921.19	27,773.80
N. Y. Transit	182,392.43	189,599.54
Northern P. L.	69,933.33	78,349.64
Tide Water P. L.	164,443.71	359,965.20
Pure Oil	295,355.25	69,124.29
Indian Ref.	269,600.16	280,245.79
Bradford Tran.	356,796.37	373,859.08
Tuscarora Oil	342,813.68	369,139.62
East Gulf Oil	.....	5,397.60
Total	4,399,141.89	4,413,056.40
Daily average	146,638.06	143,001.82

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky and Indiana at the close of November and December:

	Nov., '30	Dec., '30
Nat. Transit	823,883.04	796,609.10
S. W. Pa. P. L.	432,055.87	444,175.42
Eureka P. L.	1,501,400.77	1,500,225.43
Buckeye P. L. (Macksburg)	547,588.35	643,952.78
Buckeye P. L. (Cleveland)	43,726.09	37,246.45
Buckeye P. L. (Lima, etc.)	4,622,221.25	4,424,779.87
Indiana P. L.	748,856.72	587,459.89
Cumberland P. L.	567,723.01	592,631.01
Southern P. L.	315,451.62	292,250.09
N. Y. Transit	126,550.60	140,232.95
Northern P. L.	508,980.54	515,798.08
Tidewater P. L.	976,186.74	1,049,178.91
Pure Oil	332,491.81	467,768.78
Indian Ref.	71,646.44	55,677.44
Tuscarora	16,477.12	15,325.72
Bradford Trans.	216,140.95	183,944.67
East Gulf	.....	4,695.81
Total	11,851,380.92	11,751,952.41
Decrease	586,174.95	99,428.51

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of November and December, showing gross stocks of the above fields:

	Nov., '30	Dec., '30
Pennsylvania	3,970,186.37	3,950,817.59
Lima	752,285.03	757,684.69
Kentucky	626,748.00	643,036.25
Mid-Continent	6,155,312.11	5,903,435.98
Illinois	24,171.92	40,169.01
Michigan	322,677.49	456,808.89
Total	11,851,380.92	11,751,952.41

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1927	1928	1929	1930
Jan.	56,209	52,904	51,749	75,907
Feb.	61,298	57,002	51,833	79,256
Mar.	63,247	57,485	54,252	76,688
April	60,927	56,812	58,444	84,536
May	60,284	62,067	59,902	80,548
June	62,757	58,230	58,833	75,430
July	58,674	57,144	66,087	68,921
Aug.	60,870	57,745	66,087	54,291
Sept.	60,285	53,487	67,315	56,595
Oct.	147,080	58,100	76,093	58,179
Nov.	57,275	53,865	74,831	52,332
Dec.	53,089	52,025	74,561	53,999

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1927	1928	1929	1930
Jan.	141,227	146,465	165,721	217,623
Feb.	138,534	167,368	159,387	224,355
Mar.	133,777	158,883	161,474	228,846
April	140,227	172,935	169,737	241,845
May	144,594	180,559	184,281	248,383
June	149,772	188,024	185,404	234,401
July	151,850	189,470	194,763	207,094
Aug.	188,653	192,853	184,946	205,506
Sept.	144,213	194,138	201,214	193,999
Oct.	147,036	176,000	191,367	157,675
Nov.	150,975	176,898	202,743	146,671
Dec.	144,504	173,572	186,257	143,001

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1928	1929	1930
Jan.	12,276,710	7,596,564	12,220,046
Feb.	12,180,419	8,738,835	12,991,561
Mar.	12,239,725	9,002,058	13,247,217
April	11,740,125	8,978,172	13,233,961
May	11,602,468	8,903,560	13,052,953
June	11,287,678	8,921,275	13,396,895
July	10,819,331	9,211,595	13,268,562
Aug.	10,236,743	9,440,643	13,047,061
Sept.	9,660,910	9,443,067	12,812,018
Oct.	9,229,709	9,441,101	12,437,555
Nov.	8,366,553	9,868,538	11,851,380
Dec.	7,539,555	11,253,953	11,751,952

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, Dec. 31	2,097,629.16
Runs from wells	429,069.43
Other receipts	212,050.65
Regular deliveries	353,568.34
Other deliveries	232,421.81

The amount of Illinois oil run by the Tidewater Pipe Co. in December was 27,349.30 bbls. Deliveries were 10,151.31 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1930—	Runs	Deliveries
December	239,399.95	363,719.65
1929—		
February	517,320.17	503,387.70
March	728,319.67	586,049.60
April	515,374.27	654,297.96
May	608,981.60	673,812.83
June	568,454.70	818,845.97
July	611,106.79	828,159.44
August	625,351.99	746,425.06
September	582,457.66	669,947.72
October	622,302.83	558,558.63
November	565,108.75	427,064.63
December	548,924.41	489,368.81
1930—		
January	543,387.95	498,293.93
February	548,416.44	414,536.59
March	631,944.49	469,119.53
April	530,074.22	509,304.60
May	605,147.37	504,069.94
June	572,622.57	468,658.51
July	604,529.54	388,454.47
August	594,642.12	376,742.43
September	457,001.11	371,691.63
October	478,442.13	320,688.73
November	239,399.95	363,719.55

Tidewater Pipe Co., Ltd., also delivered in December 95,661.64 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA CRUDE AND REFINED OIL AT ATLANTIC AND GULF PORTS

Average barrels per day in 1930—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
January	18,484	1,936	34,257	22,323	9,516	86,516	.....	.....	.....	.....	2,258	88,774
February	7,678	.....	24,714	14,321	5,000	51,714	.....	.....	.....	.....	2,607	54,321
March	10,548	3,065	28,871	8,774	22,484	73,742	.....	.....	.....	.....	805	74,548
April	7,767	.....	14,369	11,600	7,433	41,167	.....	.....	.....	.....	7,600	48,767
May	5,194	8,451	28,161	9,484	2,774	54,064	.....	.....	.....	.....	774	54,838
June	8,300	.....	33,333	20,767	2,333	65,333	.....	.....	.....	.....	2,400	67,733
July	17,355	7,774	43,419	23,339	6,452	98,339	.....	.....	.....	.....	4,645	103,484
August	7,418	8,742	38,968	21,226	5,255	81,613	.....	.....	.....	.....	97	81,710
September	6,300	6,400	25,600	13,400	9,567	61,267	.....	.....	.....	.....	2,433	63,700
October	2,516	3,065	27,258	16,419	4,903	54,161	.....	.....	.....	.....	5,355	59,516
November	8,367	6,233	33,300	17,733	4,600	70,733	.....	.....	.....	.....	4,800	75,533
December	5,516	4,323	30,645	9,678	3,580	53,742	.....	.....	.....	.....	4,645	58,387

AVERAGE DAILY IMPORTS OF CRUDE AND REFINED OIL AT PRINCIPAL UNITED STATES PORTS

Average barrels per day in 1930—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
January	21,161	10,678	134,581	38,677	43,806	248,903	4,322	6,453	.....	548	11,323	260,226
February	24,500	14,714	147,357	36,036	39,786	262,933	2,821	11,072	3,500	1,964	19,357	281,750
March	28,355	4,839	151,806	36,645	34,903	255,548	4,323	11,645	839	2,419	19,226	274,774
April	31,400	8,933	123,500	40,433	19,434	223,700	.....	7,400	2,433	4,167	14,000	237,700
May	24,129	9,322	174,194	39,291	28,226	275,161	8,194	11,548	2,935	1,323	24,000	299,161
June	51,533	15,667	121,067	45,033	25,033	258,333	4,413	17,367	2,167	1,333	25,300	283,633
July	42,097	9,548	154,968	37,935	36,032	280,580	5,678	9,161	2,097	2,387	19,323	299,903
August	39,032	4,484	145,613	33,355	25,097	247,581	8,419	9,323	8,548	3,000	29,290	276,871
September	38,867	8,533	150,933	34,500	25,567	258,400	6,433	12,234	.....	3,800	22,467	280,867
October	19,839	11,742	146,194	35,355	26,967	240,097	6,065	7,067	2,774	2,545	18,451	258,548
November	39,633	35,900	124,633	36,467	24,667	261,300	2,467	7,366	.....	1,767	11,600	272,900
December	21,419	14,033	122,774	32,839	33,774	224,839	6,290	10,613	2,097	290	19,290	244,129

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS (Revised)

(In Barrels of 42 gallons)

1930—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
January:	Month	21,983,242	20,892,984	25,284,352	3,273,197	1,817,685	1,780,751	2,151,090	4,113,000	81,206 301
	Daily average	709,137	671,064	815,624	105,587	58,635	57,444	69,390	132,678	2,619,558
February:	Month	20,885,660	17,977,624	23,314,637	2,965,704	1,608,376	1,738,250	2,027,984	3,963,000	74,481,235
	Daily average	745,916	642,058	832,669	105,918	57,442	62,080	72,428	141,536	2,660,044
March:	Month	19,699,979	19,115,406	25,503,082	3,504,385	1,817,871	1,942,938	2,337,028	4,223,000	78,143,699
	Daily average	635,483	616,626	822,679	113,045	58,641	62,676	75,388	136,161	2,520,764
April:	Month	18,768,742	19,541,310	24,799,763	3,734,253	1,724,460	1,909,552	2,334,810	4,257,000	77,069,891
	Daily average	625,625	651,377	826,659	124,475	57,482	63,652	77,827	141,900	2,568,996
May:	Month	19,044,444	20,587,503	26,219,488	3,978,385	1,659,895	1,907,842	2,565,219	4,414,000	80,376,776
	Daily average	614,337	664,113	845,786	128,335	53,545	61,543	82,749	142,387	2,592,799
June:	Month	18,020,795	19,754,700	25,643,705	3,765,060	1,704,060	1,925,621	2,519,190	4,288,000	77,621,131
	Daily average	600,693	658,490	854,790	125,502	56,802	64,187	83,973	142,933	2,587,371
July:	Month	18,802,024	18,032,514	25,973,521	3,541,409	1,713,680	2,079,769	3,275,894	3,830,000	77,248,811
	Daily average	606,517	581,694	857,856	114,239	55,280	67,089	105,674	123,548	2,491,327
August:	Month	18,770,466	17,162,034	25,069,598	3,491,530	1,700,102	2,151,120	3,193,341	3,417,000	74,955,191
	Daily average	605,499	553,614	808,696	112,630	54,842	69,391	103,011	110,226	2,417,909
September:	Month	17,984,306	16,509,120	23,111,822	3,405,510	1,583,280	2,008,060	3,239,010	3,396,000	71,237,108
	Daily average	599,477	550,304	770,394	113,517	52,776	66,935	107,967	113,200	2,374,570
October:	Month	18,244,053	16,632,523	23,626,553	3,571,913	1,636,552	2,142,885	3,225,550	3,627,000	72,707,029
	Daily average	588,518	536,533	762,147	115,223	52,792	69,125	104,050	117,000	2,345,388
November:	Month	18,109,459	14,941,770	22,035,222	3,459,330	1,557,870	2,136,948	2,957,100	3,222,000	68,419,699
	Daily average	603,648	498,059	734,507	115,311	51,929	71,231	98,570	107,400	2,280,656
December:	Month	17,786,728	15,057,103	21,810,359	3,432,661	1,590,951	2,157,534	3,118,663	3,328,000	68,281,999
	Daily average	573,765	485,713	703,560	110,731	51,321	69,598	100,602	107,355	2,202,645
	Total 12 months	228,099,899	216,114,591	292,392,102	42,123,347	20,114,782	23,881,270	32,944,879	46,078,000	901,748,870
	Daily average	624,931	592,095	801,074	115,406	55,109	65,428	90,260	126,241	2,470,545